USI NATIONAL SECURITY SERIES 1998

NATIONAL SECURITY LECTURE

The Influence of Contemporary Politics and Societal Changes on the Indian Armed Forces : Likely Implications and Need for Institutional Corrective Measures

Admiral V S Shekhawat, PVSM, AVSM, VrC (Retd)

NATIONAL SECURITY SEMINAR

Restructuring of Intelligence Agencies

NATIONAL SECURITY PAPER

Organisation and Concept of Employment of Strategic Rocket Forces

Lt Gen Pran Pahwa, PVSM (Retd)

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NATIONAL SECURITY PAPER

Editor's Note

The United Service Institution of India was founded in 1870 for the furtherance of interest and knowledge in the art, science and literature of the Defence Services. The Armed Forces leadership demands a quality of professionalism that can come only with educated and informed opinion on various aspects of national security, international relations, defence strategy, management of economy of the country, social issues, internal security problems and appropriate interaction with other sections of society in the country at various levels.

As part of the activities, a number of lectures, discussions, seminars, research projects, conferences and courses of instruction are conducted at the USI. Of these there are a few important annual features, spread over the entire calendar year. In this publication titled 'National Security Series' three annual features conducted during the year 1998 have been put together for the first time. These include the National Security Lecture; proceedings of the National Security Seminar; and the National Security Paper.

To commemorate its Centenary in 1971, the Institution commenced the conduct of National Security Lectures. General JN Chaudhuri delivered the first lecture on the subject of 'India's Problems of National Security in the Seventies'. Since then it has become an annual feature. It has drawn eminent speakers and has provided a forum for frank and forthright expression of views and discussions. The National Security Lecture 1998 was delivered by Admiral VS Shekhawat, PVSM, AVSM, VrC (Retd) on the subject of 'The Influence of Contemporary Politics and Societal Changes on the Indian Armed Forces - Likely Implications and Need for Institutional Corrective Measures'.

The USI conducts seminars on a regular basis for study and discussion on aspects of national security and defence strategy. The annual National Security Seminar held in 1998 was on 'Restructuring of Intelligence Agencies'.

Papers on aspects of national security, defence strategy and defence topics of current interest, by experts on the subject are written every year. For the year 1998, the National Security paper on 'Organisation and Employment of Strategic Rocket Forces' has been authored by Lt Gen Pran Pahwa, PVSM (Retd).

National Security Lecture

The Influence of Contemporary Politics and Societal Changes on The Indian Armed Forces : Likely Implications and Need for Institutional Corrective Measures

by

Admiral VS Shekhawat, PVSM, AVSM, VrC (Retd)

The Influence of Contemporary Politics And Societal Changes on The Indian Armed Forces : Likely Implications And Need For Institutional Corrective Measures

As I look upon the faces in the audience, I feel like Arjun at Kurukshetra, standing between the two opposing armies. Wherever I look I see stern seniors, former colleagues, acknowledged experts and I wonder whether there is anything I can tell them that they do not already know?

When General Satish Nambiar asked me to take on this topic, and I accepted, I must have been in some kind of a post-retirement trance. Otherwise I would have sensed what a minefield it is and how vast its scope! To address the subject meaningfully would require erudition and intellect far beyond what I possess. Like Arjun, I cannot also evade the ordeal ahead, and like Arjun, before I sound the "Shankh", I seek your blessings or give me atleast your indulgence.

Since the subject is so sweeping, I propose to approach it from the general to the particular, drawing upon the experiences of other countries and societies, more especially the USA and China, and contrast them with our own in order to discern, if possible, how the thinking of the political leadership was conditioned by their own direct experience and how it affected their views and attitudes towards military matters. I also propose to touch upon aspects of political-civil service, political-military and civil service-military relationships, mention some issues and suggest some responses.

Politics and society are inseparable and always dynamic.

In order to understand contemporary social and political forces at work, it is necessary to go back in time, perhaps a century at the very least, because political, social, and military events which occurred at that time would either still be casting their shadow on the present or the consequences of the events would be working themselves out. For example, the political, social and strategic consequences of the partition of India, far from being resolved after half a century, are in some ways reaching a climacteric for numerous reasons which can be tabulated and analysed. Further afield, the collapse of the Soviet Union and the demise of communism occurred seventy years after the establishment of a strong central authority, seemingly at the peak of its political and strategic power. Other examples also come to mind, such as Yugoslavia or Israel, which show that ethnic memories linger long and nothing is permanent either in politics or society. Rather, constant evolution is the norm.

Race or culture-related political change always exerts pressure on boundaries because these are artificial creations of state power. Nature did not create any boundary, only natural geographical obstacles, and animals and human beings moved according to the seasons and availability of food and the bountiful earth accommodated these migrations. Human migration was indeed encouraged at times, such as to the United States, which describes itself as a nation of immigrants, to Australia and elsewhere along with the growth of empires in colonial times.

Society is a loose term which describes the family and community inter-relationships of different constituent groups of a country, region or town. It is somehow presumed that social change is something perceived by the present generation which has the burden of coping with it. This is far from the case as a visit to any good museum of history will show. Modes of living, earning of livelihood, style of

dress, customs of marriage, value systems keep changing, though certain fundamentals of humanity are more durable and the subject of social and philosophical inquiry from ages past. Travellers like Marco Polo, Fa Hien, Huen Tsang, Al Berunni and others have left detailed descriptions of the nature of Indian society in various parts of the country in centuries past. Some observations remain valid to this day, others seem as strange to us as they did to the writers of that time.

To understand Indian society as it is today, one would have to study in considerable depth the external forces to which it has been subjected over centuries, for example the invasions from the North-West, the trade related voyages from the East coast to South-East Asia, the setting forth of Buddhist monks across the Himalayas and the Hindukush into Tibet and Central Asia and the seaborne arrival of the Europeans, culminating in the colonisation of India and the surging of British power across the globe, and also its withering away, beginning with Indian independence.

The dominant force in any society is the belief system which inspires it. Usually, a personal religion, and even more so a state religion, profoundly influences and regulates social behaviour, value systems, cultural practices and even economic activities. The world view of the West which gained dominance through colonialism and military and economic power, now advocates various freedoms such as of speech, livelihood, rights, religion and so on. These are even enshrined in a Universal Declaration of Human Rights adopted by the United Nations in 1948. Yet we have on our borders nations like Pakistan which in the name of religion propagate beliefs and practices that are the very opposite of a just and fair society as we in India believe in.

Whatever the authentic religious impulses that give rise to these forces, and they can be extremely powerful, there is

no doubt that these practices are also an important part of the more mundane concerns of managing affairs of state. Yet, since the mass of any population is scarcely familiar with fine distinctions of ethics, morality and statecraft, but has a strong even if misplaced faith in religious beliefs and rituals, religion becomes a force which cannot be ignored and has to be taken into account in political calculations.

The Armed Forces of any country emerge from the larger society and imbibe its values. In earlier times when professions were hereditary it may have been natural for a soldier's son to acquire a martial orientation and an adventurous disposition, and even some skills of horsemanship and arms through warlike sport and family tradition. This would have to do with the exposure the child received, much as a woodcutter's son might be handy with an axe, a farmer's son familiar with seasons in the field, or a goldsmith's son with the art of ornamentation. The Industrial Revolution in the West caused traditional occupations to yield to the requirements of the coal mine or the factory floor and the need to learn new ways demanded by the industrial age. Because of our colonial status, the Industrial Revolution bypassed India and our people remained stratified in ancient methods, adequate though they might have been, and became unable to compete in the changing markets.

The industrialisation of India after independence began the process of social change which has accelerated decade by decade until today it presents a picture of seeming social disorder, political turmoil and nostalgia for the supposedly tranquil past. If the happy past did not transform into a comfortable present and a bright future, perhaps our growing population is more responsible than any major failures of governance and policy, glaring though they might appear.

The predecessors of the present Indian Armed Forces

which numerically, largely means the Indian Army, came from the various semi-autonomous states of India which maintained armies to safeguard their territories as was the case in Europe until the Second World War. Their battles were with each other or with Delhi, much as now and more or less ceased with the establishment of British colonial power over most of India and the accompanying pacification of the princely states through various devices. Traditionally, the armies of the Indian states consisted not only of people of that region but also of hired mercenaries including European adventurers. The Hindu-Muslim colouring which has been given in many historical analyses may be questioned on the grounds that most battles were fought not for religious but territorial reasons and sometimes included believers in both major religions on either side of the battle lines.

Until the Second World War the British Indian Army and Indian State Forces comprised largely of men recruited from specific, homogenous areas. The British were comfortable with this arrangement from their global experience of maintaining local military forces in different countries. As the units were officered entirely by the British, it simplified their task of learning the languages of the troops, familiarising with their culture, understanding their religions and motivation and in general playing a paternal role as the great white father figure. It was much after independence, in fact in recent years, that the Army began to question the rationale of continuing with class composition and accepted the inevitability of social transformation brought about by the increasing mobility and urbanisation of the population. In the Navy, of course, ships' crews have never been on a class basis, indeed it is not possible, though many merchant marine crews are recruited exclusively from particular ports resulting in a national class homogeneity of sorts. The Air Force practice is, I believe, much the same as the Navy's.

It is axiomatic that whatever affects society in general will be reflected in the men that present themselves for recruitment, even though the effects of these influences may be modified or eliminated in the armed forces through training, socialisation, indoctrination and the living and working conditions. Indeed, the military man leads a dual existence, one rooted in the society of his origin with its own culture and mores, and the other of the military with its relatively modern, pragmatic, functional, religiously neutral way of working. Because of the extreme flexibility, variety and depth of the historical Indian cultural experience and the highly accommodative nature of Indian society the military individual finds little conflict between his national existence as a member of a secular, modern, forward looking Indian Armed Forces and his personal existence as part of a regional, sub-cultural group based on his state, village, religion or caste.

It would be instructive to examine briefly the evolution of the political-military relationship in some countries of our interest and the present state of that relationship. Though the European nations have a longer history in this regard, the situation in the United States of America can be more illuminating, being a superpower with a global reach and the most powerful and open democratic nation on earth. And since it was never a monarchy, one may dispense with the study of the influence of royalty and nobility on military organisation and effectiveness in the USA.

The United States came into existence through a war of independence. Political and military power went hand in hand in the American War of Independence whose turbulent conclusion saw not only the emergence of a new egalitarian order but also the elevation to high political office of military leaders, starting with George Washington. The tradition of close links between the political establishment and the

military became strongly entrenched as colonisation of the vast empty land proceeded, mostly through the gun, to subdue the original inhabitants, the Red Indians, or to wage battles for territorial supremacy against the remnant colonial ambitions of the British, French and Spaniards in different parts of what was ultimately to become the USA as it is today.

A little over a hundred years ago, the United States was once again embroiled in internal warfare, this time a North versus South civil war over the issue of slavery. The more recent history of the United States' political-military relationship in this century is too well known to require elaboration. Two World Wars within a span of thirty years made the USA a global military power. Indeed, in the Second World War US military policy and foreign policy became closely aligned and such was the wide strategic sweep of the global conflict, involving complex alliances that all became subservient to the demands of the life and death struggle.

The Cold War following World War II, the emergence of nuclear weapons, the nuclear Balance of Terror, the revolution in electronics leading to upgradation of conventional forces, and the booming economic growth and prosperity of the USA and its allies gave rise to an international military elite through the NATO alliance system functioning closely with the highest political authority in each country. They were and are tied together through a web of relationships rooted in joint exercises, inter-operability of weapons and equipment, personnel exchange programmes, development of joint warfare doctrines, presence in each others' training institutions and war colleges, on board ships, and aircraft and in joint deployments across numerous far-flung frontiers of the Cold War borders.

There was naturally a similar response from the Warsaw

Pact countries leading to closely co-ordinated political-military-economic policies of powerful, implacably opposed alliances, spanning the entire globe. This obliged politicians, both incumbent as well as aspiring, to acquire considerable familiarity with foreign policy, international relations, economic and strategic forces at work, the functioning of the military and its importance in national and alliance affairs, and thus brought about an integrated functioning of the administrative organs of state in a manner entirely unfamiliar to Indian administrative culture.

Regardless of the monarchical nature of European power in centuries past, the Second World War and the later Cold War dynamics of the political-military relationship brought about a much clearer understanding of the role of the military for the purposes of the modern state.

The two World Wars, the Cold War and the new security perceptions showed the leadership of the Western and Eastern Blocs the importance of military preparedness and advice in affairs of state. There were similarities between the USA and India in World War II in some respects, though at different levels. Both raised huge armies, over three million men, the USA by draft, and India from volunteers. These armies fought on the same side in different theatres far from their homelands. The War did not reach the shores of continental United States or the heartland of India except for the Japanese assault on the borders of Eastern India and their occupation of the Andaman and Nicobar Islands. But America emerged from the Second World War as the richest and most powerful nation on earth and India into impoverished freedom from British colonial rule.

There was another profound difference. America fought the War as an independent country with the full involvement of its political leadership and wholehearted national support to the military. India fought the War as a British colony and

the war effort was opposed by the Indian political leadership which waged a separate struggle for an Independent India. This leadership, far from offering any political support to the Indian soldiers, was from time to time languishing in British jails and were regarded by the colonial rulers as hampering the war effort. Herein lies the unique character of the political-military relationship in India. No country of significant size and population in the world inherited a leadership which was so divorced from the military reality of warfare, and which had no direct experience of it. There was one exception, Netaji Subhash, but he did not survive to see India free.

It would be illuminating to compare the experiences of a major neighbour like China and the consequential effects on the organisational structure for governing the nation. Throughout this century, until the triumph of the communist revolution, China has known internal disorder and conflict and suffered external aggression, exposing the political leadership to war against the Japanese occupation of Manchuria and major parts of Eastern China, against the Kuomintang (KMT), the Long March, the Korean War, the Cold War, the Sino-Soviet confrontation of the 1960's and 1970's, the Sino-Indian War of 1962 and the later skirmish against Vietnam.

The exposure of national leadership to the grim realities of mounting and sustaining a major war effort, of harnessing national will and skill to fight an enemy, of suffering death and destruction on a vast scale have a powerful educative effect, leading to pragmatism, judicious use of resources, clarity of objectives, steeling of will and a hardening, perhaps even coarsening, of the mind. Such a leadership is more likely to have a practical bent of mind and be able to play a more dynamic role in the building up of the nation unencumbered by high sounding theoretical prescriptions.

Leading up to independence, our political leadership had first to dismantle the British Empire in India by peaceful agitation, and then contemplate building a new India wedded to the ideals of freedom and democracy. Blessed as we were with the noblest men of the age in Mahatma Gandhi, Nehru, Sardar Patel, Maulana Azad to name a few, it cannot perhaps be said that they erred in deemphasising the military element in the affairs of state. They can be faulted for being idealists before their time, wishing to lead India on a moral path as opposed to the experience of fascism and western militarism. Yet there was also amongst them one who chose the path of militarily opposing the British Empire with genuine conviction for accelerating Indian Independence - Netaji Subhash Chander Bose. It is interesting to speculate that had he been a younger man, had he survived the War, had he returned to play a significant role in shaping the national policies of Independent India, what might have been the shape of Indian politics, our foreign policy orientation and the role of the Military in affairs of state.

It should be self-evident that the life experiences of persons colour their perceptions and guide their policies. Karl Marx could give voice to his theories of communism by studying factory workers in England and say:

> "Does it require deep intuition to comprehend that man's ideas, views and conceptions - in a word man's consciousness - changes with every change in the conditions of his material existence, in his social relations and in his social life?"

Mahatma Gandhi's humiliations and experience of racial discrimination in South Africa shaped his responses to future events in a unique non-violent way. His being thrown out of a railway carriage by a white official at Pietermaritzburg in South Africa in June 1893, in my opinion, sowed the seeds of the eventual collapse of the British Empire.

Can it be surprising that Mao Tse Tung, battle hardened after living in the caves of Yunan and the Long March came to believe that "All power grows out of the barrel of a gun" and led China to become a major military power and a harshly disciplined nation without which it may have been still a plaything of Japanese or European Colonial Powers?

Seen in this context, those of our national leaders who sacrificed and suffered so much for the independence of India, left the scene too soon, one by one. Only Nehru survived longer, and gave our nation a vision, a sense of purpose and cherished democratic traditions, but did not nurture worthy successors and was himself disillusioned when his lofty idealism encountered the hard rock of Chinese realpolitik and pragmatism. A man with an enormous grasp of world history, social forces and economic theory and enjoying the love and adulation of his people, he failed, as Prime Minister, to create the necessary military organisational structures and system of routine consultations which are an essential requirement for the security of the state. He was perhaps beguiled by the historical myth of the impregnable Himalayas and the geographic myth of the oceanic isolation of the Indian Sub-continent. Despite his exposure to the British Military, or perhaps because of it, and imagined fears of military coups amongst politicians of the time, he did not bequeath a functional and effective civil-military relationship to the nation. It is again interesting to speculate that had Netaji Subhash been there at Independence, surely the higher organisation for defence and the orientation of India's relationships with other countries would have had greater realism and a much stronger security dimension.

Lal Bahadur Shastri was Prime Minister for too short a time, but even in that brief period showed his decisiveness and quality of mind in the 1965 War with Pakistan. The highlight of Indira Gandhi's long tenure as Prime Minister

was the defeat of Pakistan in the 1971 War but she could not rise above her insecurities. Though at a personal level the then Chief of Army Staff, Field Marshal Manekshaw enjoyed a relaxed relationship and even the confidence of the Prime Minister, it did not prevent his eventual sidelining in shaping national security policy. Due to many imagined and real enemies, she came to depend excessively on intelligence reports, mostly about her own ministers and political opponents and the organisation of state began to assume a more and more ad hoc character at the cost of administrative health, until, most organs of state were reduced to ineffectiveness in routine functioning.

I emphasise the words "routine functioning" which are indicative of the efficiency of an organisation. In the public eye, only the Judiciary and the Armed Forces uphold the ideals of the nation. Things had reached a state when an incumbent Home Secretary in an informal conversation over a cup of coffee, could say that everything else is finished, meaning politicians, the bureaucracy and the police, only the Armed Forces remained intact. These words may have been alarmist, spoken in anguish under the burden of an onerous office and are undoubtedly overdramatic. Nevertheless, they reveal a state of demoralisation at high levels of Government and are a cry for help to restore integrity, probity, propriety and effectiveness to the gargantuan governmental organisation which devours the resources of the nation through its numerous ugly and proliferating progeny, and does not fulfil the objectives for which governments exist, foremost among them the security of the citizen, his livelihood, property and the quality of his life.

I turn now to the effects of contemporary politics on society and the Armed Forces. To begin to understand contemporary politics, it would be necessary to look at

contemporary politicians. I confess to complete ignorance in this area. Even in Delhi and even in senior positions the Military has only slight exposure to politicians. Few politicians have any interest in military men or security matters. Most of my casual interactions with politicians were at the VIP lounge of Palam airport or at official receptions.

If I introduced myself as the Navy Chief to somebody I would receive a polite smile but no curiosity to ask about the state of the Navy or even whether the sea was really blue! This was political prime time and could only be allocated to the high value business of party politicking, determining pecking order and the like, not for pleasantries with strangers. In fairness, it must be said that there were exceptions and some from long tenures in government or parliament had acquired at least some knowledge of the military or a wider sense of public duty, but even their curiosity was confined to narrow interests or issues affecting their own region or constituency.

Of great concern are the significant numbers of politicians who are seen in the public eye as self-serving, corrupt, obstructive of progress and justice or are even criminals. These may be harsh words but they are not original and may be found daily in our newspapers. They may also be alarmist since much that appears in the media is exaggerated. There are also differences in perceptions of those of us who, in a sense, are westernised, urban, and generally English speaking, and the vast majority living in obscure towns and villages much the same as in centuries past, lacking rudimentary facilities, except for the intrusion of baneful modern influences in the form of loud speakers, vehicular pollution and plastic bags. Despite the existence of some kind of Government schools in ramshackle buildings with a teacher or two, the knowledge of the outside world is limited and distorted. Such citizens cannot be expected to have

concerns beyond their immediate needs of shelter, food, water, roads, electricity and education. Much is changing and this will change also, but meanwhile people will elect politicians who respond to their limited agendas. Such persons, on entering legislatures, cannot immediately widen their horizons to rise above parochial and regional considerations and cannot address macro-issues and national interests, not necessarily out of apathy but sheer ignorance.

Despite the thirst of Indians for education, which may be gauged by the weight of the bag carried by any school child, the state has failed to provide meaningful education to the vast majority of its citizens. We cannot expect any improvement in the quality of our politicians until there is a true and genuine improvement in our educational system. Neglect of education may well have been one of the greatest failures of the Indian State.

In such a diverse society as ours, if change is too rapid there is risk of fractures and discontinuity, as despite pockets of segregation there is increasing mobility and also increasing social and economic disparities. The grassroots politician therefore represents a force of inertia and acts like a sea-anchor does for a sailing vessel driven before a powerful storm, preventing it from capsizing in turbulent seas.

It is also perhaps necessary for us to examine our own perceptions of the contemporary politician and see him in a more objective light. It could be that their reluctance to "modernise" and instinctive inertia will keep Indian society from being swept away into superficial modernisation and westernisation and yet hopefully will not prove an obstacle to genuine beneficial change in due course.

Corruption is now regarded as all pervasive in politics and administration and is a tax on the honest citizen for the

inefficiency of the government. It picks his pocket as well as drains the coffers of the state. Indira Gandhi passed off corruption as a universal phenomenon. It probably is, though that does not make it less painful for Indians. Nevertheless, we should see it in perspective. How often have we not seen on television a Prime Minister or other high official of Japan bowing deeply, sometimes breaking down, apologising for having siphoned away a million or two dollars and quietly withdrawing while the nation continues with its superior international airs? A few years ago the consort of the queen in an European country was accused of accepting a large bribe from an American aircraft company. Presently a former Secretary General of NATO who has been defence minister in his country is on trial for corruption in defence deals. The American mafia is justly famed for its strong arm methods and many ordinary activities in the United States' commercial world cannot take place without the mafia getting its cut. US citizens take little cognizance of this and would be indignant if told that this is corruption, as much as adulteration of mustard oil or political quotas for employment and transfers in India.

But there is a fundamental difference between corruption in most countries and that in India. Here it affects the ordinary citizen at every level of his dealings with the administration, whether it is at the railway counter, the regional transport office, the traffic policemen or the shopkeeper who sells short weight. It cannot thrive without official connivance or dereliction of duty and pervades the lower bureaucracy. Whereas in Japan, USA or Europe a politician or civil servant proved guilty of corruption finds himself behind bars, in India it would be hard to recall any major corruption case which has reached a successful conclusion, though the list of accused in interminably dragging cases might stretch from here to the home ministry. The failure to punish a single prominent figure in numerous cases of corruption suggests

a failure of political leadership of enormous dimensions. Protection to their own kind rather than safe-guarding the interests of the people who have elected them seems to have become an unwritten code of the politicians.

The picture of contemporary politics therefore is not an inspiring one and shows a political class lacking moral strength and courage of conviction based on enduring values of justice, fair play, and genuine as opposed to spurious concern for the citizen. Mahatma Gandhi had described unprincipled politics as a great evil. This has become a norm rather than the exception. Inevitably it has its effects in all walks of life, among them the bureaucracy, the police, para military and to a thankfully lesser extent, the Armed Forces.

Unlike the civil service and the police who work in close proximity to the politicians and derive benefits as well as suffer the consequences from it, the Armed Forces are relatively free from political interference. It is mainly in Delhi and that too at mostly the senior and middle levels that there is much contact with the bureaucracy and a little with the politicians. In the case of the Army, because of its deployment in many troubled areas of border states there is greater contact with other branches of civil administration including politicians, and to that extent the Army can claim a greater insight into the effectiveness or otherwise of the functioning of the civil administration across the country. The extensive use of the Army, particularly in the last twenty five years or so to contain unrest arising from a lack of sound policy, misapplication of resources, inadequate development and widespread corruption would suggest administrative failure on a colossal scale.

The Armed Forces draw their manpower from the same general pool that all other employers do. There is a popular misconception that because there is massive unemployment

in the country and volunteers turn up in their thousands, there should be no problem of recruitment. In the case of Jawans this may be largely true. In the Navy, which is more technically oriented, the experience has been that the quality of sailors despite certain educational limitations, is very high and the Air Force experience is probably similar.

There is another misconception that today's Army is the same as it was even a few years ago and the soldier is simply a brawny man with little need for more than elementary education. Today's soldier has to be well educated to absorb instruction in modern high-tech weaponry, specialised vehicles, electronic devices, tactics and leadership skills appropriate to his rank. If he is a technician working on advanced equipment his knowledge and skills have to be greater than those ordinarily required on the civil technical side.

The problem area is in officer recruitment mainly for the Army and the flying and submarine crews in the Air Force and the Navy. It is well established that in no democratic country do the requisite numbers of quality personnel ordinarily come forward for the Armed Forces except during times of economic hardship. Countries in the West which used conscription to meet their manpower requirements during the Cold War eventually had to offer volunteers substantial financial and "quality of life" inducements to match civil industrial salary levels, plus additional compensation for the uncongenial working conditions and "unsocial" duty hours of the Armed Forces. In our country this has been brought out in the surveys carried out prior to the Fifth Pay Commission, though without full acknowledgement of this by the Commission.

With the growth of the economy, which is likely to accelerate in the future, social change will also lead to higher

expectations in the population and rise in the standard of living. The availability of physically fit, educationally qualified and adventurously inclined youth of high mental calibre will continue to be tight and aggravate the problem of officer recruitment. There is frequent comment about the right type of persons not coming forward as officer candidates. Many, including retired senior officers, argue that it is inadequacy of training rather than type of person that is to blame.

My own impression is that there is little wrong with the raw material that joins the academies. But what is wrong is of great importance and the consequences appear only later in service when the inevitable ups and downs of career, family, personal good or ill fortune begin to manifest, comparable to the fruiting of a tree several years from planting when the sweet or bitter fruit of randomly planted seed shows its quality.

Today's cadet entrants are educationally better prepared, subjected to greater physical stress in training, come from very diverse social and regional backgrounds and are highly imbued with a sense of patriotism and duty which is clearly reflected in the performance of young officers in extremely challenging situations, whether against militants in the state of Jammu and Kashmir or the North-East, or in other high risk and skilled tasks undertaken by the three Services in general. The energy and enthusiasm with which they embark on their military careers has never failed to fill me with pride in our youth and hope for the future of our country.

The important weaknesses that I discerned in cadets on entry and which sometimes show up negatively at mid-career points originate in their social and economic background. Many cadets come from homes which are economically insecure. Some are the eldest of several children and seen as bread winners for the whole family. A large number of cadets

are from Sainik Schools with their own background differences varying from state to state and coming from military families of non-officer category or are sons of small traders, lower bureaucracy and the like. Some are from very wealthy families too.

The training academies do a very successful job of converting this mass of youth into potential Service officers. But social habits and standards which are already ingrained in them by the age of 16, 17 or older, lie dormant and sometimes emerge in moments of personal disappointment or stress in a manner contrary to accepted "Service norms", particularly at mid-career and senior stages when the process of attrition and selection for higher ranks begins to take its toll. It is then that a reversion to ingrained core beliefs and personality traits reflecting childhood experiences and environment manifests itself. This sometimes results in recourse to agencies outside the prescribed procedural framework of the military administrative and personnel systems, approaching presumed influential persons such as a bureaucrat in a key post, a party functionary or politician in high office. These actions become the subject of media articles of a very superficial nature which the public lap up from an unquestioning faith in the veracity of media reports. Unfortunately a lot of the opinions formed by serving officers in general are based on media reports and the personal limitations and circumstances of the individuals colour their perceptions of the soundness and the fairness of the service system.

It may be instructive to look at the inter-relationship between the security related constituents of a modern democratic state. These are the elected and transient politicians, the permanent civil services including all the sub-groups like the police, other officials paid from public funds etc, and the Armed Forces. Whereas the IAS has to

functionally work closely with the politicians in government, the police forces in addition to their normal role, have come to have a significant involvement in politics because of the unhealthy way in which our political system has evolved. To some extent this has also spread to the para-military forces which are also officered largely by the police.

Within this general framework which broadly defines the state administrative apparatus are the political-civil service relationship, the political-military relationship and the civil service-military relationship. As to the first, in the 50 years of independence the political-civil relationship has undergone a change and departed significantly from the inherited British model. It appears that the civil service surrendered constitutionally bequeathed power and authority to the politicians who were reluctant to bide by the distinction between policy and implementation. The changed nature of this relationship has been thoroughly commented upon, but seldom the underlying reasons for it.

The most lucid example, internationally, of political-military relationships is the United States which has the most wide ranging and thorough integration through its Joint Chiefs of Staff and operational command structure and the functioning of its National Security Council under prescribed political authority. In India such hierarchical integration is practically non-existent. What passes for a political-military relationship are periodic meetings of designated committees which have an uncertain existence, being revived or laid to rest at the whims of defence ministers. Some of these committees have presently emerged from dormancy and are enjoying a lease of life, but may once again lapse into somnolence with a change of incumbent or government.

A major reason for the absence of routine political involvement with the military hierarchy is the extreme

preoccupation of any Indian prime minister with domestic political matters. His role is literally that of a fire-fighter who is forever dousing flames lit by political interests in our enormously fractious states. On the eve of one particularly dramatic happening in national affairs when I presumed that the prime minister must be fully occupied in dealing with forthcoming events which were already casting their shadow, I asked the then incumbent how much of his time he could actually devote to his job, by which I meant providing leadership, vision and good administration, rather than fire-fighting. He looked at me in some surprise then said, I believe with sincerity, "not even 20 per cent." I understood his predicament and did not need any elaboration.

The fact of the matter is that the political class takes for granted the efficient functioning of the Armed Forces. They have seen them come through every trial since independence, displaying patriotism and concern for the nation at great cost in hardships endured and lives sacrificed. The politicians' time, energies and resources are remorselessly consumed by immediate problems, many of their own creation. As far back as 1975, a perceptive writer on military affairs in the sub-continent, Stephen Cohen, in comparing the Armies of India and Pakistan, had commented that it was the apolitical nature of the Indian Army and its reliability and efficiency which enabled Indian politicians to take the kind of constitutional liberties that they did. This was perhaps a simplistic western interpretation but there was certainly a grain of truth in it, if one were to recall the political events of those days and the Pakistani parallel.

I now turn to the civil service-military relationship which is too often the subject of acrimonious comment. It must be accepted that in no country, whether democratic or authoritarian, can there be a spontaneously cordial relationship between these two institutions with their

fundamentally different work cultures. Nevertheless, stable, strong and clear headed political authority such as in the USA or UK which understands the need for harmonious functioning of all organs of state, are able to exercise firm control, take hard decisions and ensure strict implementation in the national rather than parochial interest of any service, class or individual. This is achieved institutionally through organisational structures on a functional basis to ensure that political policy objectives are met effectively and organisations respond to requirements or are suitably changed. Thus the organisation for the higher management of defence in the USA and UK has undergone substantial change especially after World War II, in order to meet the perceived challenges of the Cold War and beyond.

The Cold War brought about the most thorough meshing of foreign, economic and military policies of the adversary states and the NATO and Warsaw Pact alliance systems created a new breed of international officials who had to blend diplomatic skills with military and technical know-how and learn to be good team players with multiple inter-disciplinary skills.

In India, on the other hand, the higher defence organisation which was created in a preliminary manner at independence, instead of evolving, was allowed to decline due to lack of political direction, leading to pure ad hocism in dealing with military and security matters of grave national import. The political authority having voluntarily, even if intermittently, withdrawn from this task, the omnipresent civil service has tried to fill this vacuum. It has been biting on administrative power it cannot swallow but will not spit out, and keeps endlessly chewing the cud resulting in the delays in the decision making for which South Block is renowned.

Historically, the norm in the Ministry of Defence has

been the absence of a knowledgeable and strong minister able to devote substantial time to defence matters. Without a powerful whip in the hands of a competent driver, the Civil Service and the Military have been like two bullocks yoked together, of different breeds, background, size, and disposition. The cart instead of rolling smoothly along lurches from side to side and sometimes even goes off the rutted road altogether. It rarely reaches the intended destination in time, and sometimes not at all!

Both the military officer and the civil servant seem to have a distored view of each other. Some superficial traits and life-styles observed in the goldfish bowl of Delhi are extrapolated and taken as characteristics of the particular service. Regrettably, personalities begin to play a disproportionate role not only in individual attitudes but also in institutional responses. The Military deals with real life in "real time" and often urgent and desperate situations. It has to be result oriented and is impatient to get things done. The bureaucracy knows from long experience that getting the paperwork right is the most important thing in government. It must have an impregnable defence against future finger pointing. It therefore relentlessly makes notes, examines and re-examines, as any decision may be queried, whereas there is none to question the absence of a decision, given the nature of ministership and accountability that we have.

Should the defence bureaucracy even move matters in a supportive manner, there is a still more formidable and obdurate entity, the Ministry of Finance across the road in North Block. Whereas they do a reasonable job of account-keeping, they do not appear to have an adequate understanding of the cost to the nation, even in purely monetary terms, of delayed decisions, let us say in building a warship, or providing specialised equipment for particular

terrain or operational role. Often this results in loss of precious young lives but these statistics are presumably not kept in the Ministry of Finance.

An important difference between the Military and the Civil Service work culture is that in the Military somebody always has to pay for lapses whether on the battlefield or in administrative responsibilities. In the Civil Service, though one reads from time to time of civil servants charged with fraud etc., one never hears of someone paying for failure to take a timely decision which has affected the equipping of the Armed Forces or compromised security.

Because of the peculiar structure of the Indian Ministry of Defence where the military and civil elements function in isolated compartments and the civil side has an almost complete financial stranglehold, there is a strong sense of grievance and frustration in the military and undoubtedly on the civil side too, because of constant recriminations. But the military deals with hundreds of thousands of men and their daily requirements. The men are sometimes disillusioned and occasionally demoralised when they find their officers unable to resolve their simple problems - providing the right type of clothing or boots or transport home from remote deployment. They neither understand nor are concerned with the labrynthine bureaucratic procedures which the simplest proposals have to pass through in Delhi.

Inevitably in some matters the more educated young officers interpret the inability of their senior officers to solve these problems as indifference or unconcern leading to undermining of their own motivation and hierarchical credibility. This can have a contagious effect where an individual's personal interests may be affected such as in promotions and postings. He learns from newspapers that on the civil side ministers and MLAs in state governments

have quotas for transfer of officers. He reads of mass transfers of police and administrative officials when a government or a minister changes. He believes it must be due to favouritism or other narrow parochial interest and that the Armed Forces must also be amenable to it. It is not entirely surprising therefore that as he becomes more senior his frustrations increase as ordinary personal and professional problems, age and physical decline begin to influence his interests and priorities. He may even begin to believe that the Service administration cannot after all be that much different from the generality of things in the country and he may as well cultivate some godfather in the Service or some bureaucrat in a key position to manipulate notings or some ever-obliging politician who at the very least can dash off a letter to the Defence Minister.

Here I would like to say a little bit about the personnel and promotion systems of the Services. They are not without fault, but do endeavour to uphold universal, desirable values. Being judgemental, they cannot be entirely free from the errors that human beings are prone to, even if most balanced and objectively inclined. Human qualities are not susceptible to mathematical exactitude even though the reporting system requires such a framework to facilitate performance evaluation. The assessment of an officer's ability and suitability for promotion has to be left to the collective wisdom of an experienced professional board. The Defence Ministry sometimes questions the decisions of boards and it is within its rights to do so. The board must be able to objectively justify its recommendations. But the ministry often errs in taking mathematical sequence as representing *inter se* merit and usually leans on the side of seniority which is more easily established.

An article some years ago had compared seniority and merit and stated that seniority is like maternity, obvious to

all, whereas merit is like paternity, there could be some doubt! Whatever method is adopted, there will be occasional mistakes and the system must be designed to minimise these. But merit must always be given pre-eminence over seniority, howsoever it may be determined.

The personnel assessment and promotion system in our Services is as fair as is humanly possible. Effects of personal acquaintance, subjectivity or regimental bias are minimised by the representative composition of each board and the maturity, judgement and hopefully higher loyalties of its members. Errors are more the consequences of the extreme difficulty in choosing between one competent person and another with comparable achievements to their credit. I may add that these are problems encountered in assessing individuals in any country, occupation or armed forces and are by no means unique to us.

What has become unfortunately more common is the aggrieved individual feeling that the right political intervention or the law courts will get him what he has otherwise not obtained by merit. Unfortunately this has sometimes been the case and seriously erodes the credibility of senior military leaders. Political intervention is possible not only because it lies within the constitutional competence of the defence minister, but also because the individual affected may actually be quite fit for promotion and has to be left out for want of vacancies due to the sharply pyramidical nature of higher military ranks.

I have to outline some of the political, societal and other forces that are affecting the lives of our people and specifically the Armed Forces. If the picture that emerges appears to be a negative one, we need to see it in its totality as part of a transition process in Indian society on a gigantic scale. This process perhaps cannot even be directed or controlled, like

much that happens in India. If anything it may be imperceptibly nudged along by India's culture, inherent humanity and the essentially civilised nature of our people.

I used to feel that it would take us two to three full term general elections before our politics assumes a more even character. I have now revised this figure to four or five general elections, namely twenty to twenty five years and wonder whether even this is too optimistic. The reason for thinking so is the staggering growth of our population which devours not only land and resources, but also norms and values of decency in the increasingly hard struggle for existence and jobs which provides fertile ground for political manipulation, associated criminality and corruption. Corrective measures lie largely in the hands of the state but many citizens regard the state in the form of its executive agencies as the biggest problem, even an enemy.

So what might be the institutional responses necessary to ensure that the Indian Armed Forces retain the traditional place of honour and affection in the life of the nation? Here I sense a divergence in perceptions between the public image and the self-image of the Armed Forces. According to opinion polls the public has the highest regard and respect for the Armed Forces, together with the higher judiciary, and see in the forces all the positive qualities of patriotism, honour, loyalty and manly dignity. The Armed Forces, on the other hand, seem to have a self-image of being ignored, declining in status and churlishly treated by the administration. In support of this self-image they cite the unresponsiveness of the administrative organs of the state, the increasing difficulties of attending to their personal matters in town and village in a dignified manner, the high handed behaviour of officials, and the unfair burden that the nature of their calling places on them through disruption of family life, inadequately compensated extra expenditure on frequent

transfers, highly truncated careers and a descent into oblivion on retirement. It is a different matter that in all these experiences, the "ordinary" citizen fares far worse.

Around them they see apparently less worthy people, thriving on mysteriously acquired wealth with comfortable homes and lifestyles they cannot afford even after twenty five or thirty years of arduous service. Most painful perhaps is the contrast between the ordered existence of the Service, battalion and cantonment and the apathy and disorder of civilian life in small towns and filthy bylanes and the rapacious lower bureaucracy, all powerful, omnipresent and respecting and fearing none.

There are many provisions in government rules mostly from British colonial times providing for special consideration for servicemen. Twenty or thirty years ago the state administrations respected these and local authorities would respond positively to the servicemen's problems in their home areas. This is no longer the case and massive pressure on local administrations through politics of reservation, vote banks and even strong arm tactics of land mafias and anti-social elements has steadily demoralised military men coping with personal problems in their towns and villages or in retirement after disciplined service in the military. Since there is little accountability in most state administrations it is a vain hope to expect improvement unless there is a fundamental change in the manner in which local government functions. This can only be a very slow and long process.

The self-image of the Armed Forces is the end result of a number of factors which require addressing in detail. First of all the training at the academies and higher level institutions needs to have inputs on philosophy, morality and ethics. Most Service officers will regard it as a waste of time in already over burdened syllabi. The importance of

these has been brought out by Vice Admiral Stockade, writing about his seven years captivity in Vietnam:

"Nothing in my naval training taught me how to deal with the situation in which I found myself. It was only my acquaintance with the philosophers of the ages, acquired at Standford University, twenty years before, which enabled me to cope with my captivity".

I feel that familiarity with perennial issues of success and failure in human affairs and the experience of other societies and times will lend a sense of proportion and balance so that success is not seen in exaggerated terms and failure does not mean the end of one's natural hopes and aspirations. It is well accepted that leadership in the broadest sense, depends primarily on moral endowments. Whereas these may come naturally to some, they require to be inculcated in the majority.

The removal of the frustrations peculiar to or aggravated by military service requires a much more generous response from the state in terms of facilities or compensatory packages. Even the Fifth Pay Commission did not fully address these matters. The issues of most concern are family accommodation, children's education, quality of life, medical facilities and difficulties of pensioners and widows. And, of course, reemployment for those retiring relatively young.

The most serious thought needs to be given to the higher defence organisation which requires to be restructured to put political authority firmly in control. The civil bureaucracy, which is not less patriotic than the uniformed fraternity, plays an unintended negative role because it does not have direct experience of military matters and therefore lacks the in-depth knowledge, commitment, expertise and sense of urgency to push forward proposals with conviction and in a reasonable time frame. Moreover it often functions in a political vacuum, the minister remaining detached, or pre-

occupied with political concerns. It therefore plays safe by either simply delaying proposals or consigning them to the dust bin. Most defence ministers have neither the knowledge nor the time, nor even the inclination to demand results and answers. They are not implementing some grand national strategy or political vision of their government's ideology, which if it exists, is seldom cogently articulated. Besides, they feel more comfortable with a cool and sedate bureaucrat for whom there is always tomorrow, than an irate General whose troops needed something the day before yesterday and did not get it.

I have sometimes been amazed at the mutual ignorance between the military and civil services about their respective training, organisation and nature of work. This does not show in routine working but through occasional, unguarded derogatory remarks or in private conversation. Unlike the USA, UK, Russia or China, where long-tenure or even a permanent defence civilian bureaucracy is developed, our Ministry of Defence frequently has a secretary with no previous experience of defence, supported by only slightly more experienced additional and joint secretaries. While they learn the ropes, administrative paralysis prevails. This is compounded at times by the prime minister also being the defence minister, and with his numerous preoccupations being inaccessible as well. The Ministry of Defence thus remains without effective political guidance, leadership and control for long periods. With the conductor missing it is not suprising, if everyone in the orchestra plays his own unmelodious tune!

It is also necessary apart from integrated functioning, to systematically expose civil and military officers to each other's working environment in the field, attendance at designated training institutions, periodic seminars etc. Certainly a pre-requisite for appointing civil servants to the MOD should be obligatory attendance at a Joint Services Staff or National

Defence College course appropriate to rank. These could be specially designed capsule courses for senior civil servants and correspondingly, similar short courses for military officers at civil service institutions. The idea in to inculcate mutual understanding and professional respect for each other's responsibilities. Paradoxically, the civil and foreign service participation at military staff colleges has been dwindling, as apart from being considered hard work, it is not felt to be career enhancing. This trend and perception requires to be reversed.

Most military officers have little understanding of how the Government of India is structured, the manner in which political authority is exercised, the powers and limitations of various offices, the procedural requirement of dealing with administrative matters in government and so on. Very few of the nearly 50,000 or so Service officers ever have the opportunity to serve at Defence Headquarters in Delhi. The contrast between the clear hierarchical structure of the unit or formation and the diffused accountability in the MOD and other government departments is glaring indeed. The young officer or soldier believes his superior to have the authority and therefore the responsibility to solve all his problems, whether they are quality of rations, equipment, leaking roofs or timely promotion. Cumbersome financial and elaborate administrative procedures make little sense to him in this age of computers and instant communications. If the administration does not meet his expectations, he attributes this to the incompetence or indifference of his higher authority. He does not understand or readily accept that at every stage there are limitations on authority, right up to the head of the government. It is therefore necessary that officers and jawans at appropriate levels be instructed on various aspects of government, administrative procedures and the social, financial and political constraints and compulsions under which governments function.

There is great scope for economy in defence expenditure not only through timely approval of well considered proposals but also through reorganisation, relocation, amalgamation and curtailment of functions and reducing the top heavy nature of Armed Forces hierarchy, though it is featherlight in proportion and comparison with the civil services! Such an exercise can only be initiated by a strong and competent defence minister enjoying the support of the prime minister and the cabinet and the confidence of the military and the civil services.

Changes should aim at consolidation, re-grouping and reduction in number of posts, both civilian and military in an integrated MOD to achieve more effective functioning and economy. Undoubtedly much heartburn will ensue, yet change in the management of defence can no longer be put aside as India has plunged headlong into the nuclear pool where the big sharks have so far had free run. We encounter them in every forum, whether on economic issues, technology regimes or global warming. The Government of India has no organisation where the necessary real time coordination takes place and every problem eventually has to pass through the narrow hoop of the Committee of Secretaries, a group of overworked and underbriefed men who fulfil the apt if jocular description of "committee" as:

"A group of men who individually can do nothing, but together can decide that nothing can be done"!

The much delayed National Security Council has taken birth yet again but until our prime ministers can devote more time to governance and less to fire-fighting we cannot expect effective and timely security coordination, especially because of infirmities in the newly created national security structure. I therefore feel it may be time for a national commission to evolve a consensus on India's security environment and its ingredients, the manner in which the Armed Forces are to be raised and maintained, the challenges

they face and the support they require, career profiles appropriate to the coming century and a host of related issues.

There are major problems, for example the compelling need for a youthful military which in our circumstances of high unemployment can only be achieved by assured horizontal absorption into other jobs through preferential placement as is the case in many countries. This has been examined in detail in the past and recommendations are available but as it requires inter-ministerial acceptance and a strong political will, nothing has resulted. The report of a national commission may meet the same fate owing to the compulsions of governments and the enormity of our problems. Nevertheless, it would be a step towards involving the main political parties, to debate and take positions. The serving and ex-servicemen's electoral vote is not an insignificant one and nothing galvanises political parties like the scent of a constituency or its possible loss.

To relieve frustrations, improve morale, and widen promotion prospects, those personnel who wish to leave after, say, five, seven, or ten years service, should be freely permitted to do so, and at intervals thereafter. This may actually attract more volunteers in the officer category, as well as enable having a more youthful cadre.

The Armed Forces are highly seniority, rank, ceremonial and protocol conscious. Indeed the entire command and control structure, both in peace and war, functionally requires this. The relative command authority, seniority and experience of commanders and staff officers not only has organisational importance but circumscribes the working relationship. One's position in the hierarchy is an ingrained psychological and emotional security matter and any unwarranted departures are keenly felt and affect the individuals's self esteem and image. It is particularly galling for the Armed Forces therefore to see not only a progressive

decline, as perceived by them, in their positions in the warrant of precedence but also what they see as a usurpation by other organisations of various perks, privileges, insignia and the ceremonial trappings which were formerly the exclusive distinction of the Armed Forces. This dilution of military elitism, which is not a dirty word, is sharpened by the weakness of successive governments in not making clear differentiation between what should be exclusive to the Armed Forces and what is appropriate for the police and paramilitary forces. It has now become the norm for the police forces literally to run with the hare and hunt with the hound. They wish to have the freedoms that are available to the civil services, earlier promotions and entry into higher pay scales, stability of tenure, limited transferability etc., while appropriating as many as possible of the insignia, star plates, personal flags, ceremonial and protocol of the Army. The Indian Coast Guard, not to miss out on these dual benefits, also adopted the BSF approach including the rank structure and terminology, causing problems of command, control and seniority with the Navy, under whom it will operate in hostilities.

The importance of the police in national life and security can scarcely be over emphasised, nor the recognition that they perform a most difficult and thankless job. But they must have their own distinctive uniforms, insignia and ceremonial different from the regular Armed Forces. This requires a radical departure from its British colonial inheritance to one serving a free and democratic society.

Whereas it would be absurd in free India to contemplate the Army Chief ranking in the warrant of precedence as the British C-in-C did to the colonial Viceroy, certainly many of the equations devised after independence are faulty and require rectification. A glaring one and indicative of a certain mindset is Article 23 of the warrant of precedence and its footnote, which provides that the Vice Chiefs of the Army,

Navy and Air Force will rank after the Secretaries to the Government of India in Delhi, though according to the date of entry into the article elsewhere! It does not require too much imagination to discern the purpose. A government which approves such a dispensation has to be either very naive or in complicity with the deceit.

The remedies to these issues readily suggest themselves but cannot apparently be undertaken by governments to which these can only be peripheral matters in the face of daily threats to their survival. We will have to wait for that bright dawn when strong elected governments will be free to address numerous issues of routine governance which will enable all organs and agencies of state to pull harmoniously together, like a well tuned orchestra under the baton of an inspired conductor.

The Indian Armed Forces need to rethink their expectations from a democratic society experiencing rapid social change, push towards egalitarianism, and rising economic aspirations. The Armed Forces have always had a place of honour in Indian society, it is so now and will be in the future but it is unrealistic and unreasonable to expect a prominence beyond what a genuine democratic system can or should accord - either to them or to any other officials or politicians.

As the economy expands, the availability of quality manpower for the Armed Forces will shrink, despite persisting high unemployment. The government will have to do a great deal more to remove numerous disincentives from military service, mostly in the welfare sector. Sharp anomalies in rank, pay and promotion structure vis-a-vis the civil services need to be rectified which the Fifth Pay Commission failed to do.

The government needs to hold a just and equitable

balance between contending claims of its employees and not yield on considerations of proximity or political utility, especially if it leads to the military beginning to feel that sober voices count less than backroom manipulations. The country is at a delicate stage in its political and social evolution. Many organs of state are creaky, dysfunctional or downright exploitative of the individual citizen. Society has endured years of poor governance, political credibility is declining by the day and people's faith in those two pillars of good administration, the civil services and the police is badly eroded. They place a simple faith in the judiciary and the Armed Forces but this cannot substitute for good governance.

India with its innate conservatism, amenability to discipline under unselfish leadership and inherent tolerance, may not suffer economic or social disaster or a collapse of governance as being experienced in several countries at present. But what happens in ten or fifteen years when our population reaches one billion, one and a quarter billion and on to one and a half billion? Every problem we have, of law and order, crime, corruption, breakdown of civic facilities and social harmony will be magnified manifold.

To put it plainly, the Indian Armed Forces, specifically the Army, are a bulkwark against social chaos that may ensue. They are already performing that role in several parts of the country. They are a fine instrument that has served the country well in peace and war. But they are human beings, with thoughts, aspirations, needs and sensitivities. It would be most imprudent to let this fine instrument corrode away from within. Fortunately, in my opinion, the Indian Armed Forces will never rise in revolt, placing nation above all else as they do. But they could become ineffective in the absence of sound political leadership above platitudes and parochial considerations. And that would be a tragedy of incalculable consequences for the country.

National Security Seminar

Restructuring of Intelligence Agencies

APPROACH PAPER

Restructuring of Intelligence Agencies

Introduction

Intelligence is divided into two categories – open and secret. It is a misconception to think that open intelligence has no value. It helps the collection agencies in determining the targets that have to be penetrated, and the assessment agencies in identifying the gaps in the coverage of the collection agencies.

In India, the agencies report open as well as secret intelligence, and do not identify the sources of open intelligence. Secret intelligence is collected through:

(a) Human agents, conscious or unconscious. It is called human intelligence or Humint.

(b) Technical means such as monitoring of radio and fax transmissions, data transmissions, telephone conversations, satellite communications and photography, computer transmissions and non-communications electronics. It is called technical intelligence or Techint.

Techint provides hard, precise intelligence, but by itself it may not be adequate without Humint to give a complete picture. Only Humint can indicate intangible things like feelings, mindsets and intentions. Both are equally important.

Intelligence has offensive and defensive aspects. The offensive aspect is collection of intelligence about others. The defensive aspect is preventing others from collecting intelligence about us. It is called counter intelligence (CI). CI against human agents requires attention to security vetting

of staff, physical and document security in offices, control over contacts with foreigners, discrete watch over standard of living and so on. CI against technical means relates to telecommunication and data transmission security and computer security.

The Indian Intelligence Community

The Indian intelligence community essentially consists of the Intelligence Bureau (IB) of the Ministry of Home Affairs (MHA), which is responsible for internal intelligence and security, the Research and Analysis Wing (R&AW), which is responsible for external intelligence and security, and threats to internal security from external elements, and the Military Intelligence Directorates of the Army, the Navy and the Air Force and the Joint Intelligence Committee (JIC).

Organisations like the Central Bureau of Investigation (CBI), the Narcotics Control Bureau (NCB), the Directorate of Revenue Intelligence (DRI) and the Enforcement Directorate (ED) also have limited collection capabilities related to their investigation requirements. With the increasing importance of economic intelligence, the NCB, the DRI and the ED would also acquire a strategic role.

The IB and the R&AW are responsible for the collection of strategic intelligence with long-term implications as well as tactical intelligence to meet short-term and crisis management needs. The intelligence set-up of the Armed Forces is required to confine themselves to collection of tactical intelligence and use the IB and R&AW to meet their strategic requirements.

Between 1947 and 1968, the IB was responsible for internal and external intelligence. During this period, there were three enquiries into allegations of intelligence failure. These related to the Chinese invasion of 1962, the Indo-Pak

War of 1965 and the Mizo Revolt of 1966. The findings of the enquiry relating to 1962 have not been made public. The enquiry into the Mizo Revolt reportedly exonerated the IB. The enquiry relating to 1965 drew attention to the deficiencies in the handling of external intelligence in the IB because of its preoccupation with internal intelligence and security and ultimately led to its bifurcation and the creation of the R&AW which was placed directly under the Cabinet Secretariat.

In building up the R&AW, its founding fathers studied western models, particularly those of the US and the UK and incorporated a number of useful practices such as:-

(a) Creating a permanent service of the organisation and reducing the number of deputationists.

(b) Separating the responsibilities for collection and analysis, without, however, creating separate services for these tasks. In the CIA there is a separate division for collection (called the operation division) and another for analysis (called the intelligence division) and the officers are generally not inter-changeable. The division of responsibilities is based on the principle that the two tasks call for different qualities. In the R&AW, the posts are inter-changeable.

(c) At its inception, the principal customers of the R&AW were the Armed Forces and the Ministry of External Affairs (MEA). To improve the quality of collection and analysis of military and political (external) intelligence, a Military Intelligence Advisory Group (MIAG) and a Foreign Service Advisory Group (FSAG), headed respectively by a senior Army officer and a senior IFS officer, were created and placed directly under the head of the organisation.

(d) The next important customers were the IB and the Ministry of Home Affairs(MHA) in respect of intelligence

relating to the insurgency in the North-East, international terrorism and external threats to VIP security. The need for similar advisory and co-ordination arrangements with them on an institutional basis was not felt since officers of these set-ups had for many years worked together and knew each other.

(e) The founding fathers anticipated that in the years to come there could be increasing demands on the R&AW for economic and scientific and technological (S&T) intelligence as well as for a psychological warfare (psywar) capability and, therefore, created small Economic, S & T and Psywar Divisions.

The Intelligence Collection Machinery

A number of deficiencies in the collection machinery have come to notice since the last revamping of the intelligence community was done in 1968. These are due to the following reasons:

(a) The R&AW, like the IB before it, was set up by an order of the executive and not by an Act of Parliament. This was the prevailing practice in the Western countries till the Second World War. Since then, their authorities have realised the advantages of having their existence regularised through an Act of Parliament.

(b) The intelligence agencies do not have a specific charter of responsibilities, revised from time to time. In 1990, the Government, at the suggestion of the R&AW, initiated an exercise for giving it a formal charter, but the exercise remained tentative and incomplete.

The absence of formal charters delineating the respective responsibilities of different civilian and military intelligence agencies has often led to overlapping of functions and responsibilities, avoidable turf battles and infructuous

expenditure due to different agencies chasing the same source or seeking to perform the same tasks. Two examples can be given:

(a) Since all the agencies collect tactical intelligence near or across the border without sharing with each other, for operational security reasons, details of their sources, not infrequently the same agent works for a number of agencies, feeding the same intelligence in different language. The result is not only an avoidable waste of funds, but also the possibility of the recipients taking reports emanating from different agencies, but based on the same source, as independent corroboration and hence confirmed. This problem is not unusual. The intelligence agencies of other countries have also faced similar problems, but the presence of an overall intelligence co-ordinator above all the agencies, civilian as well as military, minimises the ill–effects of this problem. In India, there has been no sustained exercise to tackle this.

(b) The 1968 revamping has left the position regarding responsibility for Techint rather vague. In 1968, the R&AW was made exclusively responsible for collection of external intelligence. This has been interpreted to mean Humint as well as Techint, an interpretation which is often challenged by the military intelligence agencies, which want to have their own Techint capability. They already have it for tactical intelligence purposes, but want to have its scope expanded. Techint involves huge investments in equipment and trained specialist manpower and too many agencies taking it up would result in a huge wastage of funds and duplication of functions. To meet the requirement of the three Services in an integrated manner and to optimise resources, establishment of a Defence Intelligence Agency needs to be considered. Techint has a CI aspect too relating to

ensuring the security of the communications of the Government, the Armed Forces, the Atomic Energy and Space Departments and so on. In India, the R&AW does not perform this role and no other agency has been designated as the nodal agency for ensuring communications and computer security. The IB's CI role in respect of Techint is very limited. The result was apparent in the way the decision relating to the privatisation of telecommunication services with participation of foreign companies seemed to have been taken without security vetting from the technical CI angle. In the US and the UK, any such proposal would not have gone before the Cabinet without first being cleared by their Techint agencies.

The role and importance of the MIAG and FSAG have been diluted over the years, the fault for which lies with the R&AW as well as the Armed Forces and the MEA. Competent officers of the Armed Forces and the MEA are increasingly unwilling to do a spell in these organisations due to an apparent feeling that this would not help them with their career in their parent services. This problem has got aggravated over the years with the result that the organisation has not been able to build up a satisfactory capability in respect of naval and air intelligence. In view of the growing strength of the Chinese Navy and the expected extension of its reach to the Indian Ocean area, maritime intelligence has acquired an increasing importance but the organisation's efforts in this regard have left much to be desired.

Economic intelligence and intelligence relating to information systems are also acquiring increasing importance. R&AW has analytical capability in respect of economic intelligence largely based on open information, but its capability for the collection of secret intelligence is inadequate. Analysts in other ministries and departments also prepare

analyses on such economic areas as merchant marine transportation and optimum choice of industrial installations as military targets. However, there is need for proper co-ordination.

Assessment and Monitoring

The soundness of the assessment process depends on the following factors:

(a) To what extent the officers at various levels in the collection agencies are objective and intellectually honest in determining the reliability and acceptability of Humint?

(b) To what extent the interpreters of Techint are scientific in drawing their conclusions?

(c) To what extent the analysts in the collection agencies and the central assessment machinery are objective and intellectually honest in their analyses.

Not infrequently, subjective factors creep in, leading to distortions, which could also arise due to honest human error. Distortions also arise due to certain institutional factors. The world over, civilian intelligence agencies tend to over-assess threats to national security so that they are not accused of intelligence failure if things go wrong. Military intelligence agencies tend to over-assess acquisitions by adversaries in order to strengthen the case for new acquisitions and increased budgetary allocations. Foreign and Home Ministries, in contrast, tend to downplay or reject intelligence or analyses which show their policies or judgement in poor light. Thus, while the collection agencies overestimate their performance, the consumers tend to depreciate it.

The JIC in India performs the task of preparation of short and long term assessments, but its monitoring of the performance of the collection agencies is not as systematic

and leaves much to be desired. Moreover, the Indian practice of the civilian intelligence agencies sending their own short and long-term assessments to the Prime Minister and other Ministers concerned, which may often contradict the JIC assessment prepared with their collaboration, creates avoidable confusion.

The JIC practice of periodically evaluating the performance of the collection agencies in meeting the priority requirements of the consumers and keeping the Prime Minister informed of the deficiencies and the action taken to remove them is more an exception than a rule. Such evaluation is particularly important in respect of military intelligence. Just as the military constantly prepares itself during peace-time for a war which does not take place frequently, intelligence collection agencies have to continuously fine-tune their capability to meet war-time requirements. Relevant to this is the readiness time of the military and the alert time of the intelligence agencies. Readiness time is the time required by the military to convert its potential peacetime capability into actual wartime capability. And alert time is the minimum time required by the intelligence agencies to give the first warning of possible war preparations by an adversary. The alert time should match the readiness time. If it does not, the intelligence capability is not up to the mark. To make them match should be one of the most important tasks of the monitoring work of the JIC. This is another aspect, which needs attention.

The Co-ordination Machinery

Co-ordination has three aspects – institutional, operational and action-oriented. Institutional co-ordination among different intelligence agencies, civilian as well as military, and between the collection agencies and their consumers is important for the following reasons:

(a) To make the product relevant to the needs of the consumers.

(b) To prevent the collection agencies from wasting time, energy and funds in collecting intelligence which is already available in the records of one of the agencies.

(c) To assist each other in evaluating the reliability and acceptability of reports by referring to each other's records.

Close operational co-ordination has the following objectives:

(a) To ensure that different agencies do not mount separate operations for achieving the same result.

(b) To prevent transgression of charters and consequent crossing of wires, resulting in possible exposure of operations, dangers to the agents and avoidable political embarrassment.

(c) To benefit from each other's operational experience and assets.

Action-oriented co-ordination ensures effective follow-up action on intelligence, tactical as well as strategic. The Purulia arms-drop reportedly brought to light serious deficiencies in action-oriented co-ordination.

The agencies of some other countries achieve institutional and operational co-ordination in the following manner:

(a) By having a common database and a common computer network in fields such as counter-terrorism, counter-narcotics and military intelligence so that agencies can easily make data checks without having to go through the rigmarole of sending memorandums.

(b) By sharing officers with expertise in different fields. The Counter Terrorism Centre of the CIA has officers from the FBI, the Drug Control Administration, the Defence Intelligence Agencies (DIA) and the Immigration Service attached to it. The Counter Proliferation Centre of the CIA has many officers of the Pentagon and the DIA attached to it. CIA officers go on attachment to the DIA for specified periods. When US troops were sent to Somalia, joint teams of CIA and DIA officers were attached to them.

In India, co-ordination is a neglected aspect, with good institutional arrangements started with enthusiasm subsequently petering out. The dilution of the role of the MIAG and the FSAG is an example. A system of regular, structured interactions between IB and R&AW officers, started in the late 1980s, was subsequently not kept up. Similar interactions with the BSF, started in 1992, were downgraded in importance. Co-ordination meetings involving the R&AW, the DRI and the NCB, also started in 1992, petered out.

In a large federal set-up like ours, co-ordination mechanisms have also to involve the intelligence and security set-ups of the State Governments. While such mechanisms exist under the overall supervision of the IB, the Purulia air drop showed their inadequacies.

How to improve co-ordination and give it an institutional, structured and strategic thrust should be an important objective of any restructuring exercise. Our agencies have not yet started working towards a common database with a common network. Who should control and direct the agencies, whether the control should be centralised or should there be some degree of decentralisation, needs to be laid down.

Counter-Intelligence (CI)

A democratic country like India with a vast area and a large heterogeneous population faces an enormous counter-intelligence problem. Our society, where freedom of expression, association and religious belief are guaranteed by the Constitution, offers ample opportunities for hostile intelligence agencies to operate. This combined with the natural reluctance of the masses to accept the imposition of security controls and the vast land and sea frontiers which facilitate easy access of subversive elements across the border, since it cannot be guarded at all points, enhance the magnitude of the counter-intelligence problem.

The general characteristics of the people play a vital part in the maintenance of national security. The average human being is temperamentally not security-minded and is inclined to give away information through carelessness, vanity, lack of security training, sheer boredom, or a desire to avenge an imaginary or real grievance. The prevailing low standard of living in the country also makes a person particularly vulnerable to material inducements offered by a hostile intelligence agency.

The importance of CI is obvious and needs no emphasis. All the secret intelligence collected by our agencies adding to our knowledge about our adversaries would be of little or no avail in strengthening national security, if our sensitive departments and organisations allow themselves to be penetrated by the intelligence agencies of the adversaries, thereby placing at their disposal equal, if not more, knowledge about us.

The tremendous progress in communications, computer and satellite photography technologies have placed at the disposal of foreign intelligence agencies, well endowed with funds and technical skills, a fearsome capability to penetrate

us not only through human moles, but also through technical means.

We are in the beginning of the era of microchip moles capable of carrying out clandestine tasks programmed for them by their maker without the knowledge of the user. The techniques for monitoring of telecommunications through satellites have advanced to an extent where it would be safe to presume that all international telephone calls are being recorded by the monitoring stations of some agency or the other. The question no longer is whether an agency can monitor the calls but whether it has the capability to process and analyse all the calls that modern equipment is capable of recording. As a result of these developments, CI against technical moles has become as important as CI against human moles, if not more important. One gets the impression that there is insufficient understanding in our agencies of the implications of the sea change in the concept of CI and of the steps needed to protect ourselves.

Seminar Scheme

To examine the above issues in depth, a two-day Seminar was held on 19 and 20 November 1998, with three sessions, two on the first day and one on the second. The programme was as follows:-

Session I 'The existing structure of the Intelligence agencies in India and their perceived strengths and inadequacies.'

Session II 'What would be the challenges for the acquisition, analysis and dissemination of intelligence in the first quarter of the 21st Century in the context of the global and regional security environment, the advances in technology and the manner in which future conflicts are likely to be conducted.'

Session III 'Based on the likely framework and given the

emerging internal developments, what should be the structure of the intelligence apparatus in India and how should this mesh with the overall National Security apparatus.'

Three papers were presented in each session followed by comments from discussants, and then a general discussion of the issue. At the end of each session, summing up and final comments were made by the respective Chairpersons.

WELCOME ADDRESS

by

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)
Director, USI

I welcome you all to the annual National Security Seminar of the United Service Institution of India. At its meeting in December last year the Council of the Institution, in its wisdom, decided that this year's Seminar should be on 'Restructuring of Intelligence Agencies'. One of the suggestions made then was that we should try and get hold of someone from some of our friendly countries to say a few words. Specific mention was made of Israel and Egypt. One made an effort but Israelis did not want to get involved with a subject like this and come and speak at a forum. With the Egyptians too, it did not work out. It is a purely Indian content.

We will have the first session on 'The Existing Structure of Intelligence Agencies in India and Their Strengths and Inadequacies' to be chaired by General VN Sharma. Three papers will be presented followed by a discussion. The second session after lunch would be on: 'What Would be the Challenges for the Acquisition, Analysis and Dissemination of Intelligence in the First Quarter of the Twenty First Century in the Context of the Global and Regional Security Environment, the Advances in Technology and the Manner in Which Future Conflicts are Likely to be Conducted'. It will be chaired by Lt Gen K K Hazari, former Vice Chief of the Army Staff. Again we would have three papers presented followed by discussions. The subject for the third session

tomorrow morning is 'Given the Global and Regional Security Framework and the Emerging Internal Developments, What Should be the Structure of the Intelligence Apparatus in India and How Should this Mesh with the Overall National Security Apparatus'. To chair that we have the former Defence and Home Secretary as well as the Principal Secretary to the Prime Minister, Shri NN Vohra. We would have three papers presented followed by a discussion.

We have with us this morning a very distinguished person, Shri MK Narayanan, who has held a wide array of assignments dealing with national security and intelligence for over twenty-five years. He was the Director of India's Intelligence Bureau for two terms - from 1987 to 1989 and again from 1990 to 1992. He has been the Chairman of the Joint Intelligence Committee and concurrently held the post of Secretary, National Security Council (at that time). As the head of the Intelligence Bureau, he was the Adviser on national security affairs to four Prime Ministers. He has been the recipient of the Indian Police Medal in 1973; the President's Police Medal in 1981; and was conferred with the Padmashri by the Government of India for his services. I do not think we could have got a better person to initiate the proceedings of the Seminar.

INAUGURAL ADDRESS

by

Shri M K Narayanan
Former Director, Intelligence Bureau

As the 20th Century draws to a close, we appear to be in an instinctive and intuitive phase of history. The pandemic of global violence is an outcome of this. Yet, as a new millennium approaches, more attention is being bestowed on matters other than future security challenges. It is Economics that is perceived as the principal global dynamic of the new era, and thus a greater deal of debate is taking place on the possible shape of performance-driven and risk-taking enterprises in the 21st Century. Little in the way of informed discussion is, however, noticed about the contours of future security problems, and how instant communications and technological innovations will bring about a paradigm shift in national security.

There is no dearth of literature on military and military-related subjects and these, no doubt, obliquely reflect national security concerns. Interesting pieces have been written on likely changes in the conduct of war on land, sea and air in the next century; the growing importance of the fourth dimension of warfare viz., space ; the role of Unmanned Air or Under Sea Vehicles in future conflicts; the critical importance of satellite imagery in future wars; the new dimensions of electronic warfare; how the Information Revolution, Information Warfare, Information Intensive Technologies and Information Intensive Weapons - guided

missiles, anti-radiation missiles, cluster weapons and the like - will ineluctably alter strategy and tactics in future wars etc. These indicate that military appreciation of the potential application of science is no longer limited to merely surveying the field of battle, but goes well beyond it. Nevertheless, all this still falls short of an all-encompassing national security doctrine.

A tradition of strategic thought was never one of our strong points. Many observers, hence, see India as a conglomerate of partial states. There are others who view it as a kind of rainbow state. Absence of a strategic tradition derives from the belief that India's nationhood is essentially civilisational. India's nationhood is seen to be sustained by the strength of Indian society and tradition, with an interpositioning of the state. This may not, however, help us survive the future onslaught of forces we are likely to encounter in the coming Century. The velocity of change and turbulence as we enter the 21st Century will be quite unprecedented, and the comfortable assumptions of the past decades will need to give way. Our national interest cannot any longer be safeguarded without our security interests being properly defined. We will have to deploy new intellectual procedures, employ more modern methodology, and take the assistance of scholarly disciplines in order to effect changes that can no longer be delayed.

Nowhere are these changes likely to be more radical than in the area of intelligence. India's intelligence agencies are moulded by the past and shaped by the present, but they will need to totally metamorphose to deal with the future. In the coming century, the need and capability within Governments to collect, produce and disseminate intelligence is unlikely to diminish and will only increase exponentially. The abundance of information available on real-time basis through the Internet, computer links, radio and television,

relatively accurate and detailed satellite imagery, or compiled or analysed by universities and 'think-tanks' will not reduce the need for accurate intelligence or its importance to national security planners. Policy-makers may have other sources of information at their disposal, and the intelligence community many more competitors in providing information to its users, but none of this will eliminate the need for 'secret intelligence'. Hard to obtain facts about hostile nations and their intentions, the plans of unfriendly Governments and hostile intelligence agencies, the capabilities of terrorists and insurgents etc., can come only from intelligence agencies and are not available on the "information super-highway" or through commercial satellite imagery. It certainly is not available with enough details, accuracy or timeliness, to serve policy-makers or the military or the Security Forces.

What will radically change is first, the role of intelligence and its utility in analysing events and trends in the coming period. This will far transcend its perceived task of obtaining "secrets" or 'predicting' individual events. Intelligence in many ways will constitute an important resource for policy-makers, and intelligence analysis will become the key to manage enormous streams of information and increase their understanding of events and situations. Within the Government, the intelligence community is bound to emerge as an 'island' where all sorts of information gets integrated and linked to policy. Much more than today, talented people will be needed in intelligence. The observation of the Murphy Commission in the US (1974) that it was a mistake for policy-makers to keep intelligence agencies away from policy and this should be remedied will come true in the 21st Century. Thus, as the 21st Century dawns, the position of intelligence in the national security hexagon, with the political leadership, diplomacy, the military, the economic and security bureaucracies representing the other sides of this hexagon, will become even more firmly established.

Second, intelligence will emerge from the shadows, be more visible and accepted as critical in many future negotiation assignments - something which was so far meant to be kept within the closet. They would in future be able to set the record straight on their successes and failures and will no longer be everyone's favourite whipping boy. For much too long, its successes (in the manner of Shakespeare's Julius Caesar) were interred in the archives of the Government. Its failures were paraded openly and sometimes perversely. Those in the know read the balance sheet as more positive than negative, but others only accent the negative. Today, there are many in the Establishment who are willing to openly acknowledge its many successes, and the numbers of such persons are bound to grow as intelligence comes out into the open. At a recent stock-taking conducted publicly in the presence of the Union Home Minister, no less a dignitary than the Army Chief gave fulsome praise to the support provided by intelligence in the successes achieved by the Army in Jammu and Kashmir. There are many more such instances which need to be aired - the unearthing of as many as 21 ISI modules in the country during recent weeks, the protective cover given to Internationally Protected Persons, and information relating to terrorist and militant activities in other pockets. In the new Century, intelligence agencies will thus become as transparent as other wings of the Government and their performance or lack of it, will be clearly on display.

Third, effecting a revolution from within. In the past, intelligence agencies taking the cover of secrecy refused to acknowledge their mistakes and inadequacies. Intelligence agencies are as prone as other bureaucracies to pre-conceived mindsets which have led them into many pitfalls. It has been a victim of the 'anchoring effect', wherein historical analysis seems to precede rather than follow a careful analysis of the situation. It has been guilty of succumbing to pressures to conform, where more than one agency is involved. It has not

been above politicised reporting, though this is less than is generally believed. The truest reason for intelligence set backs - and the reason why intelligence is oftentimes not accepted - is something which the agencies refuse to countenance viz., that they are not sufficiently credible, the information provided is too vague, and not pin-pointed enough to be put to effective use. This will have to change as intelligence agencies cannot otherwise survive.

Fourth, a seminal shift in intelligence thinking, processes and modalities. This has already become inescapable given the changing nature of on-going conflicts, with 'high' or 'low-level' insurgencies, rebel incursions and terrorism, the clandestine use of force, including 'proxy war', and sustained disorder arising from ethnicity, secessionary nationalism, and religious fundamentalism becoming the norm. This will become even more evident as the new engines of instability are totally different from those encountered in the past. It will demand far greater accuracy in terms of tactical intelligence, and a sea change in trade craft techniques. To this will have to be added the emerging clash of civilisations, the influence of ideologies like radical Islam, induced destabilisation of multi-ethnic nations, and the need to unravel the tangled skeins of sub-continental fragmentation, which will demand greater indepth understanding of history and of socio-political and socio-economic issues.

This is, however, nothing compared to the upheaval in intelligence likely to result from the technological revolution. Its effect on intelligence organisations will be nothing short of phenomenal. For one, the threat of a technologically driven enemy carrying out a devastating attack on the military and civilian infrastructure and crippling it is now very real. For another, the manner in which technical collection methods in intelligence has developed could lead to a total restructuring, if not fundamental reorganisation, of

intelligence organisations. The Armed Forces, by virtue of their bigger investments in technological progress and advancement, seem poised to capture the high ground of technical intelligence and to have an upper hand vis-a-vis their counterparts in the civil sector. As it is, the civilian intelligence agencies find themselves increasingly handicapped as compared to their counterparts in military intelligence in areas like Sigint and Comint, and this gap is likely to increase. The battle of 'beams and technologies' will find many areas that civilian bureaucracies had regarded as their exclusive preserve being invaded and dominated by military experts.

It is difficult, for instance, to see civil intelligence agencies being in the forefront of developments such as: aerial reconnaissance vehicles that confound radar tracking are equipped with a variety of receivers to monitor radio emissions and/or possess cameras that provide several thousands of paired images (for stereoscopic viewing); sophisticated titanium drones (shaped like Manta rays) which can be launched piggy-back from space, and after completion of their missions return to the launch point and eject their film capsules; image intelligence satellites with cloud piercing radar capability, producing high resolution images of objects or eavesdropping on military communications; newer generations of Sigint satellites in geo-stationary, elliptical and low earth orbits etc. Almost all - atleast for the foreseeable future - are likely to remain in the domain of the military.

Within the Military itself, I see basic changes occurring in the relative importance of intelligence vis-a-vis the other segments in the 21st Century. With the advent of the newer generation of Information Intensive Weapons and Information Intensive Technologies, intelligence will be much more than a support function and will have to be accommodated as a full partner within the meaning and understanding of C^4I^2.

Many of the current shibboleths will have to be revised as the critical importance of technological intelligence grows exponentially. This will be even more so in the nuclear era, and in preparation for the eventuality of a nuclear conflict. Spy systems capable of gauging the strength of an enemy's nuclear forces, or putting in place sophisticated warning systems capable of detecting an imminent nuclear attack using passive and active sensors exploiting virtually the entire electro-magnetic spectrum, will demand high quality intelligence obtained through technical means which is backed by incisive human intelligence. In the circumstances prevailing today, a combination of human intelligence to detect an enemy's intentions and technical intelligence to indicate the state of preparations has become inescapable, for this alone can serve as a strategic early warning during a nuclear stand off.

As the military and its related intelligence bureaucracies become responsible for a far larger percentage of the overall intelligence budget on account of their control over costly and sophisticated technical collection systems, can they be prevented from having a dominant say or in determining strategic priorities in the area of national security. This brings us up-front about the validity - or invalidity - of the fire-wall that presently exists between the civil and military intelligence communities. Currently, civil intelligence agencies have pride of place in respect of strategic intelligence in the external realm, but the moot point is whether this will continue given the onslaught of technology. Civilian agencies may find it increasingly difficult to find both the resources and the specialised manpower to undertake the many tasks that will need to be carried out. The Armed Forces by virtue of their resources and numbers can perhaps manage this more easily. Giving tasks such as collection of technical intelligence to a neutral 'third agency' may be an option, but reasons other than 'turf war' will need to be adduced for this. At the same

time, it also needs to be kept in mind - and the pros and cons weighed - whether the Armed Forces, structured as they are at present, are competent to effectively fulfill many of these tasks. The various wings of the military have their own missions, the personnel involved in intelligence tasks are constantly being changed, and most lack motivation since they tend to be looked down upon by their peers in the fighting arms. Another point worth noting is that quality intelligence demands greater freedom of thought and action than is generally found in the strait-jacket mentality imposed upon the Armed Forces.

Publicised intelligence failures are understandably few in number; the better known among the more recent failures are the inability of US intelligence to uncover the Iraqi nuclear programme or predict the preparations made by India for its nuclear tests. Intelligence failures stem from a variety of reasons - most are due to not having the right access. Some are due to poor direction of the intelligence effort, some to the tendency to misread intelligence estimates as God-given facts when they are in effect artifacts. The classic debate in intelligence is whether to take an 'essentialist' view viz., provide an assessment only if you have the empirical evidence, or adopt a more liberal approach and by inference, suggestion, and circumstantial evidence, arrive at a range of possibilities. The more secret and difficult to penetrate a target, the more intelligence agencies are compelled to resort to the latter approach, and arrive at a worst case scenario.

The absence of a nuanced approach in today's technologically driven era also leads to intelligence disasters. The inability of the Central Intelligence Agency to predict the collapse of the Soviet Union which is often cited as an intelligence failure is a case in point. This was possibly due to excessive focus on specific areas of Soviet development employing technical intelligence means, and disregarding

other evidence or other types of information. Undue reliance on technical intelligence means and unwillingness to look at other facts produces a symbiosis between purposive deception on the one hand and equally purposive gullibility on the other, leading to intelligence failures.

Concerns expressed over lack of co-ordination among intelligence agencies are justified, but viewing this as a major reason for intelligence failures would be wrong. A simplistic approach of this kind relying on unsupported propositions can only damage the case for intelligence reform. It would also prevent a proper direction being given to intelligence management and policy. No doubt, we can ill-afford the lack of integration and coordination within, and among, the civilian intelligence agencies, or tolerate any longer the costly, competing and contradictory pulls and pressures among the civilian and military intelligence departments. Yet, we should read the signals right.

I believe that the problem of sorting out 'operational bureaucracies' with overlapping responsibilities for intelligence that have mushroomed over the years, and create confusion by not sharing information damaging the national intelligence effort, cannot end till we sort out the existing archaic division of intelligence functions into external, internal, military, border, and economic. This has long outlived its purpose. With the technical intelligence revolution bringing about a sea change in intelligence methodology, we should take a fresh look at this kind of division. In any case, in a world where the link between indigenous and externally instigated turbulence has become almost indistinguishable, and money is the prime lubricant which facilitates most forms of clandestine and hostile activity, what we need is an integrated holistic intelligence effort to detect the connections between big business, bureaucracies, political elites, middlemen, narcotics agents, arms smugglers and

mercenaries and how all this undermines national security. Intelligence cannot any longer be pigeon-holed into convenient boxes. The wire diagram method of functioning of yester-year needs to change.

There are several dos and don'ts that intelligence agencies need to adhere to. Among the don'ts, one of my first suggestions - which can stir up controversy, is that intelligence agencies should tilt in favour of improving their current intelligence and short term estimates, leaving long term estimates (five years and more) to experts outside the system. There is much to be done in the short term, instead of intelligence agencies engaging in 'blue skies' speculation. In long term estimates, the criticality of secret information is limited, and to be useful long term estimates should have the benefit of outsiders.

Among the dos, it is imperative for intelligence agencies to substantially improve their knowledge about present and future dangers. The limitless possibilities that have opened up in the region of cyber-war and cyber-conflict are one. Western agencies are known to be experimenting with various means to cripple enemy computer systems and devise clandestine programmes for inserting booby-trapped computer chips into weapon systems. Israel is reported to be developing genetic weapons - employing a genetically modified bacterium or virus. Intelligence agencies need to comprehend the dimensions of these new dangers and prepare to meet them. Setting up 'Info-Warfare Offices' as a part of the Intelligence and Security Command structure is an option that could be considered. Specialized Intelligence Task Forces may need to be created to deal with the possibility of, and threat from, nuclear/chemical/biological terrorism as the rules are changing rapidly and it is no longer necessary to have the technological or industrial infrastructure of a country to create a serious situation involving a NCB

threat. With commonly available chemicals, chemical explosives of the most frightening variety can be produced. Highly lethal binary gases like *Sarin* and *Soman* can be produced by private organisations.

More detailed knowledge of the existence and the manner of functioning of the many new clandestine networks that have mushroomed should also become a charge on intelligence agencies. Loose, shadowy, fringe organisations - some with religious, some with ethnic, and some with purely criminal intent - threaten our polity and the sanctity of our institutions. Only vague outlines are available about their transnational connections and networking. The clandestine movement of arms and explosives, the role of arms cartels, the movement of 'hot money' across national frontiers, the growing cross-pollination in techniques and methodologies, 'transfer of technology', all need to be covered more extensively. Narco-terrorism needs particular care and attention. Nearly 30 per cent of the world's $ 75 billion drug traffic is organised through Pakistan-linked agencies, and Pakistan's ISI is largely financed through funds obtained by peddling narcotics. Drug cartels have set their sights on new markets throughout the world, and will require support bases to carry on their trade unhindered. The astonishing spread of synthetic drugs, and the effect this is having on the illicit world drug market will also need to be probed by intelligence agencies. Synthetic drugs could well become the drug control nightmare of the 21st Century and the chief source of funds for illegal activity.

The fall out of the growing defence budgets and expanded military capacities of many countries in India's vicinity will also need far more detailed attention of the agencies. Security hazards resulting from the perforation of national sovereignty as a result of globalisation and the advent of transnational corporations, will need to be studied. Possible

denting of national security on account of the unpublicised side effects of tampering with the market mechanism, including manipulating of stock exchanges and counterfeiting of bonds and securities, deserve to be looked into as these increase the vulnerability of governments. The forms that economic terrorism can take, such as targeting the banking system and counterfeiting of currency, are also important areas of concern, for fragile democracies can be easily targeted in this fashion.

A critical area demanding urgent attention is that of Analysis and Evaluation. With growing masses of information becoming available from diverse sources, the importance of sharply focussed analysis and new intellectual procedures need hardly be emphasised. Mechanised data banks and libraries under a centralised system for instant retrieval - whether from technical or human sources - is the minimum requirement. Techniques to project future probabilities need to be finessed, employing Operations Research, as also methods adopted by several Science Research Centres. Analytic bureaucracies do generally find it harder than other areas of intelligence to accept radical change, but changes nevertheless will need to be effected. An issue which needs to be debated is whether we should opt for one preeminent specialist analytical agency like the Joint Intelligence Committee to provide forecasts and produce analyses, or we should consider having more than one agency to provide a competitive edge to analyses and forecasts.

A great deal again needs to be done to enhance the quality of the human resource in intelligence agencies. Intelligence software reflects human ingenuity, and it is the most vital element needed to obtain insights into decision-making of hostile powers and groups. The intelligent human operative easily scores over the robotically clever machine or satellite every time. Training inputs will need to become

more elaborate so that intelligence operatives are better equipped to understand: the many new technological advances and innovations, such as high fidelity representation of topography, instrumented imagery, virtual simulation etc.; the recent advances made in explosives and triggering mechanisms - such as electronically-activated devices and detonation by using radio signals; use of RPVs containing explosives; the mechanism employed to transfer large funds across borders drawing minimal attention; money laundering techniques etc.

Is there a case for an inter-change of personnel between the various intelligence agencies at appropriate levels? I believe there is. To begin with, we could launch an experiment with joint exercises between civilian intelligence operators and Army Commands. In the case of the several civilian intelligence agencies, such exchanges of personnel should be made mandatory.

An effective mechanism for institutionalised coordination and integration of intelligence is a *sine qua non* for improving the quality of intelligence provided to the ultimate consumers. However, and despite its obvious necessity, a satisfactory mechanism of this kind is hardly found anywhere in the world. Committees in the UK, and Standing Groups and ad hoc groups under the National Security Council in the US, have had little success in this respect. The moot point, then, is whether the time has come to think the unthinkable viz., to have an Intelligence Czar, who would be 'a first among unequals'. He would need to be given a great deal of - if not total - authority over the intelligence programmes of all agencies, a major voice in determining their budgets, the final word in choosing the key personnel of these agencies and, in coordinating and monitoring all intelligence activities. He would need to be vested with unfettered authority to receive secret and sensitive information from all agencies,

both in the normal course and whenever he seeks such information. An Intelligence Czar will be a major departure from existing practice, and may not readily find acceptance. It is almost certain to provoke political and bureaucratic resistance.

It may be more acceptable, perhaps, for intelligence coordination to be vested in the proposed National Security Council. The Intelligence Committee, or an Intelligence Coordinator under the National Security Council, will however have to be vested with the requisite authority to monitor performance and provide overall direction to the intelligence efforts of the various agencies, and be privy to the sensitive information available with them. Functioning as a 'holding company' or as a Board of Directors would be futile. It must be noted also that the record of the National Security Council in the US in this respect has been a mixed one. There are now many experts in the US who think that the time has come to look at other options.

In conclusion, it has to be acknowledged that management of intelligence is becoming highly complex. Over-centralisation where intelligence agencies need to be flexible, versatile and innovative can be self-defeating. They should be able to achieve information dominance and capture the high ground in technology adaptation if they are to survive but this cannot take place if there is undue bureaucratisation. Constantly upgrading intelligence is essential, for status quoist thinking renders intelligence obsolete. This is the greatest danger that any intelligence agency faces. Improvements in methodology can only come from fresh minds and where the mind is kept free. 'Group-think' can be dangerous and intelligence professionals should avoid falling into the trap of not questioning basic assumptions. While good intelligence cannot guarantee good policy, poor intelligence frequently contributes to policy

failures. Unless intelligence evolves and modernises, a dangerous window of vulnerability will exist which hostile elements and antagonistic forces can exploit.

THE EXISTING STRUCTURE OF INTELLIGENCE AGENCIES IN INDIA AND THEIR STRENGTHS AND INADEQUACIES

FIRST SESSION

Chairman : **General V N Sharma, PVSM, AVSM (Retd).**

First Paper : **Lt Gen K S Khajuria, PVSM, AVSM (Retd).**

Second Paper : **Shri S K Datta, IPS (Retd).**

Third Paper : **Cmde Ranjit B Rai (Retd).**

Restructuring of Intelligence Agencies

First Session : **The Existing Structure of Intelligence Agencies in India and Their Strengths and Inadequacies**

Chairman
General V N Sharma, PVSM, AVSM (Retd)

I do believe that Intelligence is a very important game. When, as a Major, I was doing a course in the Staff College, we used to discuss the kinds of appointments we were going to get. The toppers were sent as Brigade-Majors in the Army - the right hand staff officer of the Brigade Commander. The next best used to go as the DQ of the Brigade - the one in charge of logistics directly under a Brigade Commander. Then came various assignments in higher headquarters, Army Headquarters and so on. And the ones who came at the end of the line went as G2 Intelligence in a formation, which meant they had not done well at all. When you look at the British and American Armies, you find that the best officers of their Staff Colleges go into logistics, the next best go to the Intelligence Corps and only the last used to go to operations. In India, there is a feeling that the intelligence people are the worst or the poorest in the line, and that's why our intelligence organisations are the way they are. I'm sure the situation is similar in the police, IB and R&AW too.

You have to have the eyes and ears to know as to whether you are going in the right direction, and whether that direction is held by the enemy or not, to achieve success – it all boils down to intelligence. We have had some signal failures in intelligence. In 1962, we went to war with China

when we never expected it. The political leadership was convinced that there would be no war and the military leadership abided by that, which they should not have. In 1965, when 1 Corps was to attack southwards of Sambha, they were told that there was no Pakistani armour there. On the contrary, there was a whole Pakistani armoured division facing us, and further backed up by another. Since we were outnumbered two to one, operations were halted. No matter which commander we blame, it was ultimately a total intelligence failure. This has been written about: the Intelligence has blamed the Army for not assessing the information correctly, while the Army has blamed the Intelligence for not having given it correctly; and both have blamed the bureaucrats and politicians.

Despite this, we have had some signal successes also. The 1974 and 1998 nuclear explosions were carried out without the intelligence community of the greatest nations on earth getting wind of it. That is excellent counter intelligence. There have been other successes too, where we have had people telling us from inside the operations rooms of the enemy, be they terrorists or others, as to the direction the latter's planning is taking. Thus, we have to count both the successes and the failures. However, while failures are publicised, successes are not. The main point in the organisation which we are going to discuss is who has the ear of the Prime Minister - is it the R&AW Chief, IB Chief, or others who deal with him like the military Chiefs, Defence Ministries or some other Ministries! I have noticed that most Prime Ministers consult the IB and R&AW Chiefs first thing in the morning. The PM is already influenced before starting the day and the opinions of others will not receive the same importance. Thus, the ball game is in the hands of the person who has his word with the Prime Minister.

We have some very experienced speakers with us. First we have Lt Gen KS Khajuria, an armoured corps man with an interesting career. He has commanded a mountain division; he was the Deputy Commander of the IPKF in which he did some signal work, as he was acting alone before Lt Gen Kalkat took over. He was the Director General Military Intelligence. He has done the RCDS from London; he has been to Baghdad, he is an expert on Kashmir, he has been to Japan after retirement to give a lecture and he is an author. The other speaker is Mr SK Dutta who has had an interesting Police career. He has been in the CBI and was its Director in 1993. He was posted with the Economic Intelligence in the Ministry of Finance. He has been checking out on money laundering and bank frauds, has been working on the Rajiv Gandhi assassination case. Though his line of activity is not pure intelligence, as a military man would look at it, but it is certainly intelligence which keeps the CBI functioning. He was in the UN observer's group and has visited a number of countries. He got the Indian Police Medal. The third speaker Cmde Ranjit Rai is from the Navy. He was in the Naval Intelligence, has written books and is a full time consultant to a shipping agency headquartered in Singapore and the USA. He is involved in international shipping, which still has a lot of intelligence functions.

Restructuring of Intelligence Agencies

First Session : **The Existing Structure of Intelligence Agencies in India and Their Strengths and Inadequacies**

First Paper

by

Lt Gen K S Khajuria, PVSM, AVSM (Retd)

" Surprise when it happens to a government, is likely to be a complicated, diffuse, bureaucratic thing. It includes neglect of responsibility, but also responsibility so poorly defined or so ambiguously delegated that action gets lost. It includes gaps in intelligence that, like a string of pearls too precious to wear, is too sensitive to give to those who need it. It includes the alarm that fails to work, but also the alarm that has gone off so often it has been disconnected. It includes the inalert watchman, but also the one who knows he will be chewed out by his superior if he gets higher authority out of bed. It includes straightforward procrastination but also decisions protracted by internal disagreement. It includes, in addition, the inability of undivided human beings to rise to the occasion until they are sure it is the occasion which is usually too late. Finally, as at Pearl Harbour, surprise may include some measure of genuine novelty introduced by the enemy, and possibly some sheer bad luck".

Thomas C Schelling - in the foreword to
'Pearl Harbour, Warning and Decision' by
Robert Wohlstetter

Sun Tzu 2500 years ago pointed out in *The Art of War*, "The reason the enlightened Prince and the wise General conquer the enemy - is foreknowledge". He says further that this knowledge must be obtained from men who know the enemy situation, and finally observes, "An Army without secret agents is exactly like a man without eyes and ears".

Our own *Arthshastra* by Kautilya lays out an efficient system of intelligence with duties for those involved. An extensive espionage network kept the King informed of happenings within and outside his State. The importance given to intelligence made it an integral and imperative form of governance. "Your immediate neighbour is your natural enemy".

In fact but for our penchant for things and ideas foreign if we were to delve into our own past, the example of good and bad intelligence usage gives us the essentials of what needs to be done. To carry out present thinking further one can perhaps lay the blame on the transfer of power from the British - Masters - to the enslaved - Us - wherein the methodology used by the rulers made it imperative for them to destroy records that existed before handing over. Thus a new beginning had to be made which really became an exercise in joining the jigsaw puzzle pieces rather than a fresh and new approach which would have needed study and analysis to put together an effective machinery for the future which suited our requirements.

What has therefore evolved over a period of 50 years is an amalgam of what was inherited and 'add ons' based on needs and red faces. A failure, and there were many in various fields, made the leadership see red, the performers were taken to task and patchwork actions initiated to prevent repetition. But repetitions did occur with regularity, not always in the same areas but related ones. The story carries on.

Here it is of interest to draw a parallel to another factor that manifests itself in the Indian political frame: from a dedicated and committed leadership that fought the British for independence and were thus patriots of a high order, the newer generation of leaders and politicians are perhaps more clever and in some respects professionals but are definitely lesser men in most respects. The fruits of power and pelf, venality and personal interests above overall good and national development became stronger day by day. The bureaucracy, which as the ICS had enjoyed power, prestige and aspect based on ability, became politicised and compliant. The venal politician bred the venal bureaucrat and vice versa. The down slide in probity started as a drop here and there and has now become a torrent. We are today in this stage of governance.

Foreknowledge and intelligence as the agent and instrument of forewarning grew in this milieu. The various agencies which were created when their need became imperative, matured in this dispensation. In all fairness professionalism did grow, but alongside also grew the invariable intelligence dilemma. What did the leadership want and how did they want it? Were personal and party interests stronger than national needs? Did the agencies so set up fall prey to narrow political concerns of staying in power and at the cost of the Nation's interest? Did the syndrome of 'having the ear' dictate behaviour of agency heads towards their political masters and the bureaucrats? Did our agencies become sources of 'produce to please' reports? Did the expedient instruments of governance in the shape of politicians without an iota of knowledge of what governance meant, take over without the benefit of advice of what is wrong and what is right from those charged to provide the same?

The questions can go on and on. The answers of course would not be lengthy as it would suffice to give the same in simple 'yes' or 'no' syllables. These answers can be given by

any educated citizen and does not need an intellectual mind to analyse and give verdict. The last decade has seen the manifestations and the answers in daily print and every time the loss has been that of the Republic and its toiling millions. It is in this context that there is need to carry out a detailed analysis and suggest "the restructuring of this vital sinew of governance". The intelligence need and its set up.

One more aspect needs to be dealt with at this stage. Bureaucracy in the nation has usurped for itself an all pervasive power structure. This effectively prevents the political decision makers in our democratic set up from getting direct inputs which are not conditioned. Consequently inputs get routed through a bureaucratic sieve which ensures that its own status does not come into question but in fact gets enhanced. Do recall the opening quote which spells out how obfuscations take place. This is highlighted to suggest that mere restructuring of various agencies would not produce results, if the bureaucratic dispensation is not going to also undergo very necessary change.

Let us also recall that free India started with only the Intelligence Bureau and it was much later that the Research and Analysis Wing came into being. For the Army, the military operations branch functioned as the intelligence agency also till the import of a separate intelligence branch was felt and a bifurcation took place. And we are talking of the 1960's of the 20th Century and not medieval times. Another point to note here is that the civil agencies grew out of a police culture, which is both open and visible for maximum effect except for the criminal investigation department. The intelligence set up per se must be unseen, seldom heard and specially trained to be effective. It is a matter of some satisfaction that after 50 years of independence, steps have been taken to a fair degree to remove this anomaly.

At present there exist the following agencies which deal with intelligence and security.

(a) Intelligence Bureau (IB).

(b) Research and Analysis Wing (R & AW)

(c) Military, Naval and Airforce Intelligence Directorates.

(d) Central Bureau of Investigation (CBI).

(e) Directorate of Revenue Intelligence.

(f) Directorate of Enforcement and Narcotics Control.

(g) Most Ministries have departments or bureaus which tackle economic and blue collar crimes, e.g., Central Economic Intelligence Bureau in the Finance Ministry.

(h) Paramilitary Forces such as the Border Security Force and Central Reserve Police Force and others also maintain their own intelligence agencies.

(j) The Joint Intelligence Committee (JIC).

All these have evolved as need was felt for them and as intelligence needs at times are urgent, dependence on other agencies was not a satisfactory arrangement. Proliferation took place and today we have a plethora of agencies dealing with different aspects of security. The JIC is expected to co-ordinate the functioning of agencies to the extent of regular meetings, receipt of inputs and production of reports for use by the government. In practice, the degree of co-ordination needed does not take place except occasionally and even the JIC cannot produce accurate and really worthwhile reports.

As there are commonalties in what needs to be done to restructure and create more effective intelligence inputs, some

common problems which are contrary to this effectiveness are listed. The aim is to generate thought and analysis for an active debate so that detailed restructuring emerges.

(a) Lack of continuity in the senior hierarchy of the agencies. Minimum fixed tenures are absolutely essential for agency heads and three years must be ensured.

(b) Whereas it may not be possible to make the agencies autonomous, it is essential that political and bureaucratic interference is totally avoided. Specifically, political patronage must be guarded against.

(c) Selection of the heads of national level agencies such as IB, R & AW and CBI must be transparent and must involve a panel which comprises multi-disciplinary personalities of impeccable integrity. The ruling party of the time must not have more than one person in the selection committee.

(d) Co-ordination of activities of various agencies has to be by a body which has prestige and teeth. This applies to security–related as well as economic-related agencies, individually. Such a body or bodies must be free from bureaucratic interference while having a full flow interaction with various ministries involved. As and when the National Security Council is functional - if ever setup - this coordination can be one of its charters. There would be need of course to keep the security-related and economic and narcotics-related under separate co-ordinating controllers. Too much of democracy in such set ups can and will be countervailing.

(e) There is need to cross-post officials for periods of time to ensure not just knowledge of the functioning of each other but to appreciate the *modus operandi*, which perforce

will vary from each other. The areas of duplication will also get known and whereas by itself duplication is not harmful, too much of it without awareness would be counter-productive.

(f) Selection of all agency heads should not be by seniority alone. Nor should it necessarily be from within each agency. The right person for the job is what is needed and the selection needs to ensure this.

(g) The need for a Defence Intelligence Agency (DIA) cannot be denied. However, the prevailing needs on a daily ongoing basis vary considerably for the three Services. As such, the aspect of rotational head of the DIA (or whatever name is given to such an organisation) needs greater analysis and debate. Here perhaps, the Army needs which are preponderant and vast would suggest a single source head with suitable representation from the other two Services. This will be a point of contention and will thus need resolution by debate and mutual respect.

(h) The other two main security-related agencies, IB and R & AW, have in the past been used by the Prime Minister in office on a personal level. Whereas the PM cannot be denied advice and information from any source, the dependence and consequent upgradation of one agency creates unnecessary problems, envy and jealousy being parts of it. A *modus vivendi* to ensure correctness is a need.

(j) A check and balance ambience is a must. Healthy rivalry between agencies can only lead to better functioning. However, undercutting, disinformation and outright denigration of each other has to be totally avoided. Here again the NSC will need to play a part particularly when it comes to overlap between agencies and some ministries with connected interests.

(k) The CBI definitely needs to be made independent of political bias and dispensation. In recent years there has been too much of adverse comment on the use of this agency by politicians and bureaucrats in a partisan manner.

(l) All intelligence gathering, collation and dissemination is a specialised function. A high degree of training alone can provide the expertise where fewer mistakes are made. There is need therefore to recruit high grade material and for some period of initial training. Even have common syllabi and training. Based on potential and inclination, such trainees can be sent for specialised training to the agencies they are found most suitable for. A higher degree of professionalism would thereby be ensured, and in addition the time spent together also pay off in better understanding of each other's roles, problems and functioning.

There are countless issues which can be listed. The aim here is to draw attention to some so that when detailed analysis is carried out, sectionally, other issues are uncovered and brought to focus. Within each agency, there is need for structural change and analysts focussing on each would be able to do justice to their subject of interest.

That change is needed cannot be denied. Change for the sake of change of course must be avoided. It is the pursuit of excellence in each field that needs to be enhanced. Actions by nations, when based on total knowledge, prevent reaction and that is an aspect of good governance.

Strengths

1. Organisationally, all agencies have worked over a period of time quite suitably.

2. In specific operations good success has been achieved by all agencies from time to time.

3. In Assam, information and intelligence regarding Bodos and Naga dissidents has been satisfactory.

4. In Jammu and Kashmir, the flow of information and intelligence has mattered very considerably in the recent past.

5. Signals Intelligence is generally under wraps, as it should be, but has been one of the most useful means of intelligence. There is need, however, to upgrade capability constantly with an eye on the factors particularly for the Forces. It is an organisation which needs high professional competence and innovations as well as backing.

Weaknesses

It is not my intention to point fingers, but weaknesses if set right can become strengths. Hence a listing in some detail.

(a) Quantity of manpower and training are not of desired levels. The FBI recruits only post graduates into its ranks. In Military Intelligence, the other rank is classified just above that of an unskilled labourer.

(b) Training modes and institutes are not of the desired levels. These need to be made more professional.

(c) Knowledge of foreign languages is abysmally low, if at all it exists. Functioning in foreign countries properly involves use of foreign languages for passing messages and for translation of published material. Such activities are greatly hindered.

(d) Own MAs and staff have no specialised intelligence training other than a few days of interaction with the Intelligence Corps.

(e) Third country operations are of very poor quality. Several agencies more or less are banned from acquiring this capability. R&AW feels that this is strategic intelligence and hence in their domain.

(f) Inter-Agency co-operation needs a much higher level. Here the Defence agencies needs come mainly from the R&AW and IB but little flows back. The commitment levels thus suffer, as does accountability.

(g) Poor quality and inadequate capability of sophisticated equipment hinders efficient functioning.

(h) Technical intelligence capability needs enhancement. Elint, which must constantly flow monitor sensitive border areas in territorial depth, is practically non-existent.

(j) Real time or War real time access to information as also intelligence is vital; but too little of this exists at present and the quality is poor.

(k) Backing to intelligence operators when in trouble is absolutely essential for confidence.

(l) Postings and rotational systems result in lack of indepth knowledge and expertise. The Army, for example, applies field and peace area tenure criteria postings to all commands for people and no stay beyond three or four years in Delhi to intelligence personnel also. Other agencies have prized foreign postings to contend with and hazard postings internally.

(m) Intelligence is a 24 hours round the clock function. The 9 to 5 ethos needs total overhaul even if it involves increase of personnel to some extent.

(n) Finally it is important to list governmental - political and bureaucratic - interference and expedience in overlooking or preventing investigations. The Nelson's Eye and Ostritch Syndromes result in national security degradation of the highest order in the form of criminal nexus, banking and fodder scams, import sell outs or the brace of sharmas related crimes, not to forget the Samba Spy Scandal.

National security implies the ability to pursue national aims and economic well being without outside interference and coercion. Economic growth has today become the prime concern of all nations and their people. Invariably this will lead to competition and clash of interests on trade which is essential for economic growth. To be able to stay ahead of others and also be aware of their plans, it is essential to have advance information of what may be adverse to our intentions. The role of intelligence agencies thus gets automatically established.

Military strength in peace time depends entirely on foreknowledge of what may be done to undermine it. Individual states or groups of them may and possibly *will* have designs to militarily weaken the nation. Kautilya's advice thus holds good and in an enhanced manner in today's milieu.

To safeguard national interests before the military has to step in needs dialogue with those who may become adversarial. Diplomacy and members of the foreign Service must play their part with alacrity and dedication. In this they need to be in constant and harmonious contact with the Defence Intelligence agencies as also the R&AW and Economic ministry agencies. Such interaction would help to enhance planning. The political leadership and the bureaucratic set up needs to make use of gleaned information and intelligence to formulate policies. There is imperative need to lay down very specifically

the role of all intelligence agencies and to ensure that overlaps are complimentary and not disruptive.

The management aspect has already been touched by me earlier. Basically they are related to providing a charter and giving freedom to function to produce the intelligence that helps governance. I have also mentioned, perhaps rather strongly, that the present dispensation is sadly lacking. Therefore, it is vitally important that self-serving norms are put to the guillotine at the earliest along with those who have made a fine art of practicing them and get down to the business of doing what is best for the country.

If the intelligence agencies are made fit to function effectively and given the freedom to provide the necessary inputs to be forewarned then their management for good governance would be automatic. I do strongly feel that whereas the intelligence agencies have a very important role to play in ensuring national security, the present day functioning under the dispensation that exists only provides less than 50 per cent of what is needed.

I would like to end with a couple of quotations :-

"Success often comes to those who dare to act: it seldom goes to the timid who are over afraid of its consequences. People avoid action because they are afraid of the consequence, for action means risk and danger. Danger seems terrible from a distance; it is not so bad if you have a close look at it and, often it is a pleasant companion adding to the zest and delight of life". -- Jawaharlal Nehru

"There are certain things without which we cannot live and certain other things without which we should not care to live". -- Sarvapalli Radhakrishnan

Restructuring of Intelligence Agencies

First Session : **The Existing Structure of Intelligence Agencies in India and Their Strengths and Inadequacies**

Second Paper

by

Shri S K Datta, IPS (Retd)

Introduction

When I was asked initially by Maj Gen YK Gera to make a small presentation on, "Restructuring of Intelligence Agencies", I was really hesitant for two reasons. Firstly, I have never worked in the second oldest profession of the world. Secondly, some in the intelligence community perhaps have an attitude of knowing all that is required to be known and do not appreciate interlopers like me.

As a faceless CBI man, I was associated with some of the cases which came to the surface as a result of operations carried out by foreign intelligence agencies on our soil. These cases have received media coverage and some have since been convicted by courts of law. I am not therefore leaking out any secrets.

More people are in this business of intelligence now than before. We have in it not only professional sleuths but also a lot of other people like journalists, professors, intellectuals, politicians, etc. No system of intelligence

collection can be perfect. Intelligence failures are many; so are the success stories which are never reported in the press for obvious reasons. I shall deal with a couple of cases where intelligence inadequacies could be observed.

Rajiv Gandhi Assassination Case

The investigation of the Rajiv Gandhi assassination case was very difficult from the very beginning. It was a clueless case and the path of investigation was from crime to criminal. Haribabu's ten photographs gave us the initial breakthrough. Information on the network of LTTE set-up in Tamilnadu and Karnataka was given by an outside agency. With the first arrest of Nalini and Murugan, after a great deal of chasing, the case opened up and searches could be organised at several places on the basis of available information on the LTTE network. The searches yielded result by way of recovery of documents, spare wireless sets and many other exhibits. The whole game eventually was to arrest the principal accused - Sivarasan, the one-eyed jack. He was holed up in Tamilnadu – Karnataka because of the massive sealing of sea and land borders. The Nepal route was blocked and the safe havens in Delhi and Jaipur smashed. In this, all the agencies did co-operate.

Sivarasan was carrying a powerful wireless set for transmission of messages to Jaffna and receipt of instructions from Jaffna. The agency involved in interception had only one direction finder. Two more direction finders were required to pinpoint the exact place of Sivarasan and his wireless set. It may sound absurd but the fact remains that two more direction finders could not be arranged as they were just not available. We all felt deeply frustrated. We were wondering how did we manage to do similar exercises in Punjab and Jammu and Kashmir. Both the States were targeted heavily by Pakistan's ISI. Anyway, we got Sivarasan

dead. All of them hiding in a house in the outskirts of Bangalore, consumed cyanide when the police reached the hideout.

Wireless messages were intercepted before and after the assassination of Rajiv Gandhi. They were very clear messages indicating all the elements of conspiracy and escape arrangements made for the conspirators. There was initial reluctance to bring them as evidence in a court of law as that would compromise the functioning of the system. It is equally true that Sigint is no more a secret. All the agencies all over the world have this facility. These messages were useful to prove the case of conspiracy.

In this case, we also introduced the technique of telephone call analysis in a big way. Our earlier experience in another murder case had given us good results by using the same technique. In this operation, certain telephones were targeted for call analysis. We had telephone numbers of LTTE in London and Paris. We found that immediately after the blast, a call was made from Madras to the LTTE office in London which, in turn, contacted its counterpart in France. By this analysis, hundreds of LTTE linkages were found in India and abroad. We got international co-operation.

This technique was used in a subsequent case of murder of an Assistant Collector of Customs in Allahabad very successfully. This is a good area of target spotting for intelligence agencies. What could be done during investigation could also be used in intelligence gathering.

Telephone Interception : Need for a New Law

The CBI has no power under the Indian Telegraph Act to intercept telephone calls. The existing law is not adequate. Even if messages are intercepted, there are difficulties to use them in evidence. All democratic countries have

transparent Interception Laws under which a competent judge or magistrate has to be approached for issuance of an interception warrant. I know of two cases where the intercepted messages abroad prevented a big bombing of a prominent building in Delhi and the hijacking of a plane from Delhi. The friendly country could not hand over the tapes as the messages were intercepted after the expiry of the validity period of the telephone interception warrant. It is really necessary now to enact a clear and transparent telephone interception law in India. People will have more faith in our system of working and enable enforcement agencies to fight legal cases against conspirators if such a transparent law is enacted.

Co-ordination Cell in Punjab

One aspect of the Punjab experience needs to be recalled. The CBI was under instruction of the government to co-ordinate with the states in the matter of intelligence gathering against terrorists. The first area of co-operation was to exchange information and intelligence and pool them together in the form of an intelligence digest. Officers from various states used to meet once in a fortnight. The intelligence digest proved useful for mounting operations in respective states. Each operation led to disclosure of arms and ammunition and the arrest of suspects. The other most important task of the co-ordination cell of the CBI was to interrogate some of the important terrorists without using any third degree method. Their statements proved useful and were given to all concerned. Top spies of Pakistan's ISI and Paramilitary Intelligence were also interrogated with good results. Shri KPS Gill was an admirer of this cell. All information was fed into the computer. Whenever a suspect was arrested anywhere in India, the computer was in a position to give details of his involvement in various cases as also the names of his associates and the names of his handlers. This speeded

up anti-terrorist efforts of all the States. The ISI network came to our knowledge, including their expanding network in southern and western India in a big way.

The Punjab experience of co-ordination cell was, however, not repeated in the state of Jammu and Kashmir or in the North-East, at least not during the time I remained in service. The greatest obstacle in co-ordination lies in inter-departmental rivalry. This happens in India and elsewhere also. When the interest of the country is involved, all are required to co-operate and work as a team. For an effective anti-terrorist and counter-intelligence offensive, a good and sufficient data bank is a must.

Diamond Merchants Kidnapping Case

It is well known how five or six important diamond merchants were called from Bombay to Delhi, kidnapped and kept in the basement of a house in Sukhdev Vihar. The name of one Ravi Choudhuri came to light as the prime accused. The house was possibly guarded by an extremist or an organised criminal organisation. Punjab newspapers were found in the basement. Ravi Choudhuri was a Muslim who stayed in different hotels in Delhi under various assumed names giving his nationality as an Indian. He took a car on rent without a driver. He was well acquainted with Delhi roads and lanes giving the impression that he must have been a frequent visitor. 'Ravi', however, made a mistake. He met a prominent Pakistani leader in Marina Hotel and arranged for his visit to Ajmer Shariff. With a great deal of delay the Pakistani leader could be interviewed in Pakistan and he did admit that Ravi was a Pakistani, but did not reveal his real name, or address. Our search for Ravi Choudhuri ended there. We did request agencies to locate this "Ravi", but nothing came out of this exercise. Incidentally, in Pakistan, ISI operatives were also called 'Choudhuries'. This kidnapping was arranged to extort ransom money

abroad as these diamond merchants had branches abroad. Our own money was possibly used for ISI activities in India. Thus, we found that foreign intelligence operatives had free access to our country without any check.

Bombay Blast

In the case of the serial bomb blasts in Bombay, organised crime syndicates were used. The organised crime syndicates are always vulnerable. They may be used for anti-national activities in future also. Organised crime is a fact of life in India. There is no law to deal with organised crime. The USA, Canada and many other countries have enacted legislations to deal with this. A bill was prepared in 1996, but no one knows what has happened to the bill. Apart from lack of legislation, no agency in the country has been tasked to gather intelligence against such powerful and organised groups of criminals. They have all the potential to act as extended arms of anti-national forces. This area of emerging crime needs immediate tackling.

Money Laundering for Terrorism

For terrorist activities money is required. All terrorist groups soon become extortionist groups and manage to raise sufficient funds by way of extortion and illegal taxes imposed on the people. Much of this, through Hawala channel, are kept in safe haven in other countries. These money-laundering activities of terrorist groups and mafia organisations must receive our attention by specific targeting and not by chance discovery of such laundering activities. For this to happen, international co-operation is required. Apart from Hawala, money is openly sent to many questionable organisations by way of foreign contributions. While working in the Economic Intelligence Bureau, I had occasion to study a few sample cases. Surprisingly, some of these remittances originated from tax haven countries. Many of these organisations need to be watched and efforts made to find out the names and

antecedents of their foreign donors. A link has to be established between Foreign Contribution Regulation authorities, intelligence agencies and the CBI. This is not happening the way it should happen.

Retrieval and Analysis of Published and Unpublished Records

I have so far explained some of the inadequacies in the system. I now propose to highlight as to how a system of retrieval and analysis of published and unpublished documents can help spot targets easily. A specialised group with computer experts can work out a scheme of analysis of data with a view to spotting persons who may be involved in some illegal or anti-national activities. We have the case of Ravi Choudhuri, Sivarasan, Pakistani spies and a host of other cases. They beat the system by a series of false declarations at every point of contact. They appear and disappear without any paper trail. They may be criminals or spies and agents of a foreign power tasked to commit a series of criminal acts. A system has to be devised to neutralise such criminals from committing big crimes. The new system will only supplement the existing system of intelligence gathering.

The contact points are many. For the time being we may identify some of these:

Air and train journeys.
Immigration documents.
Visas.
Passports.
Hotels.
Telephone and Fax.
Cars and Vehicles.
Banks.
Credit Cards.
PAN.
Driving Licence.

The process of verification may be initiated by two methods. If target is known then on the basis of minimum information verification is speedier. If the target requires to be spotted, then some parameters may be fixed. For example, if a man visits the country too frequently, he needs to be checked discretely to know if the journeys are legitimate. If not, checking on other variables may be taken up to know his linkages through telephone call analysis. The exercise is limitless. Every record is now computerised. Therefore, there would be no need to store data. Only an interface with the respective computers will be required for culling out the required information.

This exercise is likely to yield results. The by-products of this analysis will be equally interesting. They may be relevant to tax authorities, police agencies or other enforcement agencies.

Collection of Street Intelligence

Collection of street intelligence is another untapped area. For organising the Bombay blasts, hundreds of people were engaged for loading and unloading of explosives and arms. This did not attract the attention of the field officers of customs and the local police.

A system of automatic recording of information by the Police, especially in metropolitan cities, is likely to yield good results. I have seen such a system in Australia. In the Rajiv Gandhi assassination case, the people were requested through press and TV to report on the absconding accused. Some 2500 messages were received. Out of these, 10 to 15 messages were found to be true and relevant to the case. All these messages were computerised and checked.

There may be other methods of collection of street intelligence. TV programmes on "most wanted men" have

led to arrests of absconding suspects. These unconventional methods are worth experimenting with.

Police control rooms all over the country should have one common telephone number. All information received by the control room should be recorded manually and mechanically and transmitted to the concerned authorities.

Beat constables should be debriefed every week to know if they have picked up any unusual information like visit of strangers, movement of suspicious goods, unusual activities of some residents or some rumours floating around. Bits of such information must receive the attention of higher formations for follow-up action.

Conclusion

Intelligence is to be gathered in response to requirements articulated by consumers. The product (intelligence) will not be available if the consumers are not asked to report their requirements. In the USA this exercise is being carried out regularly. We too can adopt the same strategy. Aimless collection of intelligence will not lead us anywhere. As somebody has said "When an intelligence officer smells flowers, he turns around and looks for the coffin".

In sum, as a ringside observer of events, I feel that there is a need to readjust our methods of collection of intelligence for apprehension of conspirators, abettors and practitioners of crime involving terrorists, mafia, organised crime, and money launderers. These areas need attention for the prevention of subversive activities and detection of cases. Such activities threaten the internal security of the country.

Restructuring of Intelligence Agencies

First Session : **The Existing Structure of Intelligence Agencies in India and Their Strengths and Inadequacies**

Third Paper

by

Cmde Ranjit B Rai (Retd)

Though Ancient Indians scribed the treatise *Artha Shastra* and in it gave much credence to the role of Intelligence for good governance, modern Indian leaders have never employed intelligence as a tool for governance or for military advantage, but used it for personal ends. Sardar Patel was the only leader who used his intelligence agencies to some national ends to amalgamate the States into the Union. This will come out clearly as I have been assigned to explain the present set up. But first a preamble and all this I say with the experience of three years as Director, Naval Intelligence and five years in major naval operations and as Director and Joint Director Naval Operations especially during Operations Blue Star, Pawan and Brasstacks, where I used intelligence methods to update my bosses.

World over the means, art and the collation of intelligence has taken a very different meaning than that understood 50 years ago. Though its pride of place is not diminished, it has changed in this age of the information revolution, technology and computers. In days of yore, it meant extracting secret data, uncovering plots and gathering information about the enemy, through means fair and foul. The spy was the man in a duffel coat with a patch on his eye or the sexy woman seducer. Agents' movements were surreptitious. Their acts were dastardly and daily activities 'derring do'. Today, it has come to mean information that has been extracted by fair and foul means, selected and collected but also analysed, evaluated and distributed to meet the unique policy formulating needs of the particular department or organisation. Dirty tricks still abound. Satellites provide ground data and the Services have formed DIPAC. Good intelligence is an essential and vital tool for the management needs of governments, the military and enterprises. The modern spy is now an analyst who wears Hush Puppies, a Rolex watch, dons a Pierre Cardin suit and smells of Pacco Raboone. Intelligence is extracted and organised information to get the true picture for decision making world over. When decisions go wrong, intelligence inadequacy is often quoted and we know it from the 1962 India-China War, 1965 War, Operations Blue Star, Brasstacks, Pawan and now terrorist activities in Jammu and Kashmir, North East and in city RDX bombings like in Mumbai in 1983. Yet the proliferation of intelligence agencies in cocoon cast roles has led to volumes of data, numbers of human sources, but lacks central direction and that is the main inadequacy. Professionalism and national goals are absent. Assessment gets based on personal creeds and in perpetuation of the government, and in the Armed Forces by the personalities in power. This has amounted to sychopancy in India's intelligence set up.

The vital aspect of coordinated analysis, evaluation and distribution has never been fulfilled, for fear of falling out of favour. There has been a proliferation of collector agencies and lack of central direction. Overall intelligence is under no Head or Security Adviser, and co-ordination is absent. Yet the network is vast and good, spreads tentacles from one man the Cabinet Secretary down to the lonely plain clothes policeman

of the Special Branch and CBI sleuths with vast powers of arrest and trial. Admittedly then, a policy making body has been absent and intelligence feeder lines are lacking to achieve policy aims. It has become the story of the chicken and the egg, the post or the agency which came first. Power hungry police bureaucrats turned intelligence men have kept the many seats warm and individual approach has become the dictum in the absence of any scrutiny whatsoever by any Intelligence Audit Agency. Accounts to the tune of Rupees 1,000 crores are also not auditable.

The Backdrop

As a backdrop, the British after partition left a sound internal Intelligence Bureau, which had tentacles all over India and presence abroad. The present system came into force in 1962 after the India-China War and there have been six additional agencies added to the list continuously, but no cohesive attempt was made to marry the vast arsenal of intelligence that is gathered. Only the ranks of heads of agencies have got upgraded. Parkinson's Law also took hold. Most agencies are now headed by Secretary-level incumbents and JIC which was to be the fountainhead became the impotent dumping ground for senior unwanted bureaucrats of the intelligence community. RAW (Research and Analysis Wing with ARC Aviation Research Centre with a large fleet of aircraft equivalent of CIA with M16) at one time had service officers to assist in military intelligence but after some internecine battles, especially on seniority issues and professionalism, the service posts were eradicated till a Chief Petty Officer, ex Navy, in 1987 became the Naval Adviser on intelligence. Similar actions were experienced by the Army and the Air Force. Attempts by the Armed Forces to muscle into R&AW posts, the comfort laden external intelligence agency by way of a DIA were thwarted by the entrenched interests of bureaucracy, and remains so. The Military, on the other

hand, has curbed Service Intelligence from blossoming and even in the Services the three wings are independent. DG DPS took over functions in OP PAWAN but gave up after three days. The Samba spy case is another story of a frame up.

Intelligence is also a dirty and tricky business because every good intelligence set up has to have a dirty tricks department also. The Services also have watch in plain clothes agencies. R&AW has one too but more than that, intelligence estimates must be open to serious questioning within restricted rooms. In India, this has irritated intelligence bosses and agencies. Second opinion, as in surgery, must be sought. The Brahminic streak in us has never accepted this and sadly, the nation and its leaders, despite a vast bank of information have been poorly serviced with poor analysis. Information is withheld from the users, and I am sure this seminar will deliberate restructuring.

Observations by Discussants and Open Discussion

First Session

Discussant: Air Marshal C V Gole, PVSM, AVSM (Retd)

The three speakers have very ably explored the basis of intelligence, its existing structure in the country and shortcomings. No doubt, in the time allotted to each speaker, they could not cover the subject exhaustively in all aspects. Therefore, I would like to mention a few of these aspects which need attention:

(a) Harnessing of advanced technologies to intelligence requirements. The range of latest developments is vast and the country has to be selective to get maximum benefit at minimum costs..

(b) Extensive and intelligent use of space and electronic media and Electronic Warfare (EW) techniques.

(c) Information and Psychological War techniques.

(d) Industrial, commercial and agricultural intelligence.

(e) Use of supercomputers to gather, collate and analyse different strands of information and intelligence, to produce a comprehensive and cohesive picture.

(f) Special stress on economic intelligence, since most international conflicts in future are expected to be based on economic factors and not merely on territorial, ethnic or fundamentalist ambitions.

National security is gradually expanding to multiple dimensions. In addition to more military requirements, it now encompasses geopolitical, economic, ethnic, religious, human and even ecological aspects. Our information base and intelligence coverage, therefore, has to be muti-disciplinary in order to extend to all such aspects. This makes the task of collection, collation, analysis and inference that much more difficult. It is therefore quite obvious that this task cannot be fulfilled efficiently by any single agency. An "Intelligence Czar" is neither feasible nor advisable. Instead, co-ordinated and dedicated efforts by a group of experts have to be accepted.

One of the major shortcomings of the existing intelligence structure is its inability to make long-term projections of national interests and security on which national strategy can be based. The urgent need for an organisation to take up this task has already been highlighted. The Government has already announced its plan to set up a National Security Council. There, however, needs to be a radical departure from the previous NSCs, DCCs etc. Mere hawking of old wine in new bottles will not do.

It is curious to note that not only in the presentations this morning but also in all such previous efforts, all the evils are finally dumped at the doorsteps of the nefarious bureaucracy-politician nexus: be it security, law and order, liberalisation or the day-to-day administration. If this is true, then what can be or needs to be done to erase this malaise? Again, if this is so, why have the professions not asserted themselves. Why is it that even the scientists and now even the Armed Forces tend to fall in line with this nexus or make selfish use of the same. Please note that in the fifty years of this nation's independence not a single prominent professional or defence person has resigned on the issue of principles. Or is this evil built into our Constitution and

national ethos? If so, how do we tackle it and find a way to surmount it? This, in my opinion, is the most important challenge for us.

Discussant: Rear Admiral K Raja Menon (Retd)

After listening to people with hands on experience in intelligence, I can only add very little to what has been said. If there are any successes in our intelligence set up, most of them, I think, are in the field of electronic intelligence. In this field the two organisations of WEUs and DIPAC are good success stories. Naturally, this makes one wonder why the reasons for the success of the WEUs came up at a time when the only substantial electronic emissions in the military were in high frequency; so the WEUs were limited to this band. Subsequent electronic warfare (EW) intercept organisations again branched out into single Service outfits with the Air Force flying its own EW squadrons; the Navy now has its own info-warfare squadron and the Army its EW battalions. While tactical EWs will always remain single Service, there has to be someone who concentrates on strategic communications. There used to be an outfit listening in to Japanese crypto-traffic during the Second World War. After the War, it circulated reams of foreign broadcasts, which were quite useless. But even this has now become defunct and there is no strategic eavesdropping. For almost fifteen years, the meagre satellite resources of this country have not stopped the Indian Meteorological Department (IMD) getting a shot at telling us why it rained last week! But we have no EW satellite even today. For this disorganisation in strategic electronic intelligence, I can only blame the Armed Forces, whose failure essentially lies in not being able to integrate its intelligence organisations. This failure has its consequences in there being no worthwhile strategic electronic intelligence network on any frequency band because only the Armed Forces has the background, the personnel and the funding to

start anything on a big scale. Mr Narayanan has rightly stressed this point as an area in which the Services have not moved into at their own cost.

In missing this opportunity it is not that the Services have only missed out on intelligence, but there must be enough people here who will understand that it is the possession of intelligence that makes a party a player in the turf battles of any capital. I cannot help recollect a book by the retired CBI officer Shri NK Singh, who casually mentions that the Prime Ministers often rang him up twice a day. The point is not that this is right or wrong, but that it happens. Here I must regret to disagree with Mr Narayanan, because it is my experience that intelligence agencies invariably passed actionable intelligence first to the Prime Minister's Office(PMO) and then to the operational Services involved. Why PMO? Because that is where the ACRs are written. So if we are waiting for the Government initiative to institute the equivalent of GCHQ, Cheltenham (UK) or the NSA (USA), it is never going to happen. The Services have to pick up the ball and run with it if they so desire, exactly in the manner they did with DIPAC - the information coming from the IRS series of satellites.

There is, for instance, an equivalent of DIPAC with the R&AW. This, in my opinion, is wrong, but if DIPAC concerns itself only with finding out where the F-16s are or where Pakistani armoured divisions are, this great asset that the Services have will never have any strategic significance – only tactical. Problem is the same - the Services must have a corporate goal and not a single Service goal; no DIA, no cure. When it comes to human intelligence, the charter fortunately is clear – the R and AW for outside intelligence and the IB for inside work. This is fine and it is the practice followed by all countries, although I am aware that in Jammu and Kashmir as in the North-East, when insurgency

was very bad, the IB sources were wiped out and the MI had to go it alone. This is okay for Humint, but not so in Techint. We have had our experts tell us about the occasions when in the past, intelligence was adequate or when it was not. I would like to put forward the point that it is not so much the adequacy or the inadequacy of the intelligence but the collection and dissemination of the stuff – my own observation is that this is the area where we are entirely inadequate. In this day of computer-aided filing and presentation, it is sad that dissemination is still poor. The information exists but cannot be found or accessed. This cannot improve unless the three Services get together and have a computerised clearing house. Mr Dutta stressed this point quite rightly. I can think of the software of the New York stock exchange, which would do very nicely for something like this. Otherwise, operational organisations will continue managing with six-year old satellite surveillance photos, when newer ones are available in Delhi.

Lastly, I cannot help feel that eventually the output of an organisation depends more on the culture prevailing in that organisation. We could take a leaf out of the experience of the Mossad or Shin Beth - how these two organisations have such excellent cultures and, therefore, give the maximum output for the least investment. The answer probably comes from the clean way in which the top man is chosen. In a multi-party system, we must not forget that the government appointing the head of an agency will, and often does, misuse the agency for political ends. One way out is to have a multi-party panel that chooses intelligence heads, so that once selected he can devote his entire time to running the agency and not to pleasing his political boss. In India, the intelligence agencies come under the PMO, which in my opinion is an extra-constitutional authority having arrogated power to itself that rightfully belongs elsewhere in a parliamentary democracy. When the PMO also controls the intelligence

agencies, there is a concentration of power that is unhealthy and bad for the organisation.

We must not forget that the intelligence agencies produced two Heads of State – Bush and Andropov. Bush made his way up in a transparent democratic system, while Andropov misused the position of head of KGB to manipulate himself into power. This is the worst kind of intelligence set up one can possibly have.

OPEN DISCUSSION

Comment: Commander Radhakrishnan

A reference was made by Mr Dutta about finding people to utilise the intelligence gathered. I think he was saying that twenty-odd people are required. I think it is due to some inherent weakness in our system. We, as a nation, have to be very clear on what out national interests are in various fields like external affairs, defence, science and technology (particularly so when various sanctions have been imposed on this country), economic intelligence - both domestic and foreign, and last but not the least, domestic intelligence which will affect the structure of our democracy. If there are no permanent friends or permanent enemies but only permanent interests, it is necessary to codify what these interests are both in the long-term and the short-term. I have heard from senior Service and civilian intelligence officers, including the head of a service, that there are no documents of this sort. This is an essential requirement to get the intelligence agencies to perform well. There is no point in blaming them if they are left in the dark. As far as domestic intelligence and national democratic set up is concerned, while it is essential that individual freedoms are not affected or intruded upon, you cannot always evade it in the interests of the nation's security.

Answer: Shri S K Datta

So far as computer applications are concerned, it is a very small thing that is required for the Research and Statistical Analysis. It is in addition to what is happening today. And I agree with you on the need for consumer-oriented intelligence.

Comment : Mrs Seetha Radhakrishnan

Two points were not attended to. One, what about the subjectivity of perception of facts and its influence on intelligence? This subjectivity is related to the aspect that the facts generally are not discreet items, which can be defined and put up as something definite. There is, thus, a necessity for a body or a group of people or some statutory institution that would vet diverse perceptions into objective intelligence. Subjectivity in disparate organisations gathering intelligence cannot be synthesised by one individual - the Prime Minister or any other individual, whatever the inputs one may go into. This boils down to the inherent public administration problem in this country of generalists and specialists. Is the intelligence man a specialist and is there a need for a generalist overview of what the intelligence man thinks is useful and necessary?

Secondly, at what cost will the intelligence system function vis a vis freedom of thought and speech, which are basic rights of individuals? We have to have right parameters on where intelligence functioning will infringe upon this and have it properly understood? Who is the target for which you are providing security? It is the society, the people of India. To what extent can you encroach upon their freedoms entrenched in the Constitution?

Much is made of competition as a spur for progress. I think in this field of arriving at objective intelligence, competition is really dysfunctional.

Answer: Commodore Ranjit Rai

Mrs. Radhakrishnan has hit the nail on the head. I will just read out to you what I have written:. "Intelligence estimates must be open to serious questioning within restricted rooms – we have not nominated them." Somebody said it is the PMO. In India, this has irritated the intelligence agencies and bosses. Second opinion as in surgery must be sought. Rank structures intervene and sadly the nation and its leaders, despite a vast bank of information, have been poorly serviced with poor analysis.

In contrast, let me cite the American system. Everybody around the world sends in a Country Report. On India, the Country Report will go covering economic, military affairs, etc. Every week, in the American Embassies all over the world, these reports are sent. At that meeting the heads of each section sit down and quickly make a precis of it. If there is any disagreement on any of the items, a one line dissenting note is added. Three months later when action is taken, they know where the analysis is correct. In Washington, anybody wanting to know about India will have access to reports from five neighbouring countries. Unfortunately in India, it comes by the diplomatic bag and hence takes time to be disseminated.

Comment : Chairman

I do not think any country in this world has been successful in its intelligence acquisition and correct action thereafter. In fact, in Hitler's Germany, for example, the fact that perceptions were one-sided led not only to World War II but also the defeat of Germany. Today, the greatest power on earth, which has the best intelligence acquisition system is the United States. And incidents similar to 'Big Brother' watching people as in the famous *1984*, where the citizen is taken to task by virtue of the way the intelligence

organisations report upon him, is happening in the United States. So, there is a profound thought behind what Mrs. RadhaKrishnan said. Nevertheless, the question of perception is based upon the human being that is giving that perception and the fact that we have a number of intelligence agencies and the need for co-ordination is one of the ways by which varying perceptions come to light.

Secondly, on freedom of thought of the individual in a democracy, when the political leader has to act, there are further inputs in the political leader's mind such as: how to continue to be a political leader on one side and how best to run the show, so that he is not removed from office or that the country does not suffer too much. So, they don't necessarily listen to the perception that is being presented by any organisation, be it intelligence or others.

Comment : Vice Admiral Mihir Roy

The speakers left out one major aspect - Counter Intelligence, which is as important as intelligence. After what happened in 1962 and 1965, we could not afford to be pilloried for not having intelligence. In 1971, we met the chiefs of the Intelligence Bureau, Research and Analysis Wing and the Border Security Force (BSF), along with the three Service Directors, every evening and discussed the situation. Sam Manekshaw would come and listen and report all that transpired to the nearest thing we ever had of a National Security Council (NSC) i.e., DP Dhar and his people, who then reported to the Prime Minister in the morning meeting. What we need today is that sort of a community that does things together.

Comment: Chairman

You are right Admiral Roy. Shri Dutta spoke about some aspects of counter intelligence from the police point of view and from the CBI point of view. But military Counter

Intelligence is certainly a game that has been going on since the days of the British in India. It is nothing new. But we had found that it does not seem to function as well as it ought to, especially vis a vis the ISI activities of Pakistan.

Comment: Brigadier Desai

In view of the situation in India, which seems to be moving from bad to worse, the Defence Services will have to take the lead, because they are responsible for both external and internal security. They should take the initiative to generate whatever intelligence they want. After 1962, they learnt their lesson and in Jammu and Kashmir such initiative has paid a lot of dividends. The three defence services should get together and start something on their own, initiate action on whatever that affects internal or external security. In this connection, I would also go to the extent of suggesting that the defence intelligence services should also try and snoop on politicians of doubtful integrity. This is important since these politicians are likely to become the leaders of the country, which would be disastrous. We can prevent this by bringing out their shortcomings.

Answer: Lieutenant General Khajuria

It is true that intelligence is not functioning as well as it should. As far as the initiative of the Defence Services is concerned, a few figures could make it interesting. The budgets of the three Service Intelligence agencies is somewhere between Rupees 1.5 to 2 crores per year. In comparison, the budget of the IB is Rupees 500 crores, while that of R&AW is double that at Rupees 1,000 crores. In this situation, the question of carrying out own intelligence becomes very difficult. And every time we tried to break away from the system and demanded more budgetary allocation or permission for third country operations, we were told that we would be trespassing on somebody else's domain.

But, on our own, we did certain things occasionally, which we should not have. For example, we managed to capture somebody from abroad, from across the border, and kept him for one year. None of the other intelligence agencies knew about this even though they were part of the system. This person was someone who could give us a lot of information on what happened to President Zia-ul-Haq and how he died. The Chief, the Defence Secretary, the Defence Minister and the Prime Minister knew it. But whenever you do such things and tried to hide, then you have the feeling of guilt of not being able to do what you should do. Things like this do happen. Whereas the suggestion is good, the possibility of it happening is very remote.

Comment : Chairman

It is an interesting question and I am glad that Brigadier Desai raised it. Because, many military people do believe that. The point at issue is who does the country have to trust - the military or the elected leaders. It is up to the public in a democracy to select the leaders the way they want to. Those leaders have to be responsible, because if something goes wrong they will not be elected next time. But if you give too much authority and power to a particular organisation, because information and intelligence is power, those who have maximum power may utilise it incorrectly. The question that arises is whether they should be given that power.

The question was raised earlier also, whether we should have a single co-ordinator, for example? The main criticism against that is – too much power in one hand. Therefore, in any organisation of governance, there is a requirement for a number of agencies to provide intelligence and information and at the same time keep a close watch on each other, so that the man at the top, be it the politician or otherwise, is able to understand what is to be done.

Comment : Professor Satish Kumar

My question is how to raise the level of 'respectability' and reduce the level of 'untouchability' or 'hush-hushness' about the intelligence profession as a whole. Intelligence, as I understand it, has two aspects - operations and evaluation and assessment of the information. I concede the point that the police service and the military services are amply qualified to do the operations part, and therefore most of the personnel who man the intelligence agencies overwhelmingly are competent people from the armed forces and the police. But, I find that to the extent non-Service people are associated with the intelligence outfits like the R & AW they are limited to the very fringe aspects of their functioning. For instance, translation work from a foreign language, etc.

While working on my book *The CIA and the Third World* at the John Hopkins University in 1978, I found that some of the best minds and best graduates of the School of Advanced International Studies (SAIS) were aspiring to join the CIA. In contrast, we in India, for whatever reasons, consider the profession of intelligence as something not very respectable for two reasons: -

(a) The element of secrecy: nobody likes to disclose that they work in the Cabinet Secretariat.

(b) There are not very competitive rates of remuneration in terms of salaries and perks, etc.

Given the fact that intelligence assessment today is multidisciplinary, you need to draw the best brains from the profession of international relations, economics, science and technology, electronics and other fields. What is it that prevents us from broad- basing the sources of recruitment to the intelligence service and making this an attractive profession so that those who work in it are proud of it and drawn from diverse fields and not just from the armed forces and the police?

Comment: Chairman

That sort of argument not only works for intelligence but also works for bureaucracy and for political decision-making. That is one of the reasons why people want the National Security Council.

Comment : Shri Anand Verma IPS (Retd)

We have considered intelligence after 1947. Since the British days, most people feel that intelligence involves "dirty tricks" and that good governance should not have anything to do with dirty tricks. Therefore, the whole aspect of not sending the best people to intelligence is a part of this mentality. I have always felt that the military operations department in peacetime is a much less important aspect of the Army than the intelligence, but nobody has accepted that. This has happened in the civilian arena too.

Comment : Chairman

The idea is very good, but that is left to the agencies concerned. When an intelligence agency or individual wants intelligence, he goes to anybody and everybody besides the agencies concerned. I have done it myself when I was Eastern Army Commander, even to civilians to check on certain things going on, besides the intelligence that I received. So the idea is good but I do not know how it would be institutionalised. Whenever the other professions are called upon to give their views or examine certain scientific intelligence or education intelligence in other countries, they have come out very well on the subject.

Comment : Professor M L Sondhi

My point of departure is what Admiral Raja Menon said about the Prime Minister's Office. There is a democratic deficit in the whole interaction of intelligence with the present state

of the political system. One has seen it in Israel where this problem is faced directly by specialists within the intelligence community. For example, Dr Martin Sherman who served in the Mossad has written on the question of international politics and democracy, bringing in the nuclear dimension as well. There has to be a decision and this has to be internalised by the intelligence community that you either shrink the aspect of democracy in which case you evolve certain solutions, which are vertical. If you accept the Constitution of India, you have to expand democracy everywhere, which in India, to my mind, means resolution of conflicts. Our enemy is not the politician or the gangster but the inability of good people to manage disputes. We have to get over cantankerousness everywhere, whether between the bureaucracy and the Service officers or between the politicians or between the two major political parties in this country which are tearing each other down, instead of evolving a two-party system. It is, therefore, necessary that the challenge be faced by the people dealing with intelligence rather than passing the buck and come up with a theoretical explanation of conflict. After all, they are two things. One is 'every spy a prince'; I regard every spy as a prince. But then Machiavelli's book was not called 'The Prince' but 'Advice to the Prince'. So, what is your advice?

Comment : Dr Balachandran

Recently a National Intelligence Estimate on missile threats to the United States was in fact overseen by a number of people who had no relation to the intelligence community. We should also do something like that.

The Entity List has come. The interesting thing is not what it said about India, but what it said about Pakistan. My understanding was that Pakistan had one enrichment plant at Kahuta and another under construction at Golra. But the

List actually mentions four. Obviously, the Americans know more than us and have much more intimate information about Pakistan's nuclear programme. If the Entity List is right, then all this discussion we have had is academic.

Comment : Vice Admiral Puri

What are the levels of decision-making that are required and what is the intelligence input required at each level? At the lowest level, these intelligence agencies would be aware and at the tactical level they probably would be able to support the organisation that they are dealing with. As we go higher up the ladder into operational or theatre levels, more and more combinations of agencies would become necessary because inputs required then are not specific to a point; it is not limited to a battalion's area of operation, etc. While we do very well at the tactical level, when it comes to higher level - operational, strategic - we are found wanting. The questions asked at each of the levels are very different; and so are the answers. The theoretical base - I talk from my experience in the Command and General Staff College in the USSR, where we were dealing with operations' level of war or the conduct of war at the national level - the method in which intelligence plan was drawn up – I have not seen it happening here.

At the national security level, the answers to questions that we are seeking go beyond the strategy of the armed forces to the level of seeing what power equations to develop and how to maximise national power, which can happen by orchestrating the economic, diplomatic and strategic muscle. The nation must also decide what muscle to use at what time and in which place. At that level, the civilian input would be more important. For example, RAND Corporation is working at that level. We need to systematise and perhaps work out a theory of how all this works.

Answer: Rear Admiral Raja Menon

I entirely agree with Professor Sondhi - this issue is much larger and it isn't that we don't know what lies ahead. If you translate the subject to a question of sociology, where the reduction of tensions is going to result in an ideal world - that will certainly solve all our problems. Unfortunately, we don't have the luxury of researching in this subject and waiting for twenty years. We, who are accountable for certain functions, have to live with these dysfunctional attitudes. One of them, as Seetha rightly said, is the stranglehold of the bureaucrats. There is no specialisation, which today cannot be downgraded to this derogatory term – technical advice – which means there is a generalist sitting on top who has 'the big picture,' which apparently the technical guys cannot have!

The other problem is the limitation of democracy. I would like to think that everyone here believes that the ultimate authority in this country is Parliament, i.e., the elected body. But we have become cynical over a period of time. We have seen the injustices the Ministry of Defence (MOD) metes out to the Armed Forces to whom the only jury of appeal is the Parliamentary Consultative Committee on Defence and the Parliamentary Estimates Committee on Defence. If one reads these reports, it will be a severe indictment by the Parliamentarians on the functioning of the Ministry of Defence. As for the bureaucrats of MOD, many of them have moved on to higher positions. Nothing happens to them. So, we are in a quandary. If we want a parliamentary audit of intelligence agencies, then we should have something like the US Congressional Committees – which are never held *in camera* unless they are really secretive; you can get their proceedings. But the reason why here everything is done in an opaque manner is because our parliamentary system and social system have not matured to the same level. The point is we are unhappy; yet we are just living with it.

There are 72 people in Parliament who have criminal records. The cynicism is not limited to the audience here but comes across the board even to those politicians who have come up the right way. If we have such criminal record holders in the intelligence committee then things would be difficult. In Uttar Pradesh, 12 criminals are ministers. A cleansing of the entire system is required.

One more aspect that needs mention is the case of J. Edgar Hoover, who stayed 33 years as head of the American FBI. Even though he is considered the 'father' of many intelligence-related things in the US, there did take place several things during his tenure that were not totally correct.

Comment : Chairman

One of the factors, according to some people, that has allowed India to survive is in fact its rather amorphous method of functioning. When George Tanham said (it was quoted by Shri Narayanan) that India does not have a system of strategic thought, I replied that his view of strategic thought might be questionable in Indian parlance because not having a strategic thought is in itself a strategic thought!

Comment: Shri Anand Verma, IPS (Retd)

Some of the points made here indicate how misinformed people are about what really matters. My personal experience may throw some light on how things really happen.

The proximity of the Intelligence Chiefs to the Chief Executive of the country: it all depends on the agenda of the gentleman concerned. Most of them who held this post were least interested and did not require anything apart from what mattered most to them. Given this premise, an Intelligence Chief can make himself useful to the Chief Executive because only he gets close. To the extent he is found useful, the Chief Executive will spare that much time for him. Only very few

chief executives understood the value of intelligence or the role that could be played by a good Intelligence Chief. The rest did not understand the value of intelligence, neither did they need the services of the Intelligence Chief.

The agenda of the intelligence organisations: given that there is no co-ordination; nobody is laying down what are the matters to be reported and why; there is good information but no follow-up action or an understanding of the need for the same; in such a scenario, the intelligence organisations are left to themselves to decide what to enquire into. Since most consumers are not interested in the information sent and the end product, the intelligence are quite content with what they do. There is no oversight. On the contrary, there should be a political and parliamentary oversight on the functioning of the intelligence organisations. The earlier its introduction, the better it will be for the general health of the country.

The role of outsiders: there is no expertise within the organisation for analysis on a sustained basis, which is other than related to just facts. There is a lack of deeper understanding of the events that are taking place - the social revolution through which we are living now. All equations in our society are being changed. An intelligence analyst has to understand that. Within the portals of the intelligence organisations that are found in the country, such expertise is not available. There has to be a multi-disciplinary approach to analysis. Hence, the product is not as good as it is in certain other countries. For example, in the United States, all the top Ph.Ds of universities like Harvard or MIT or Berkeley at one time were to be found only in the CIA and nowhere else. Why can't something like that happen here?

A related point is on why people do not want to join the intelligence organisations. Being an intelligence operator is a negative mark on an individual's personality. Hence, the

quality of the product is not good. The system has to allow the induction of well qualified people and made worthwhile for them. The reason for this not being done lies with the bureaucracy, which is the most negative influence in the country. It does not want improvement in the intelligence personnel or make the organisation worthwhile because of fear of better perks and remuneration for the latter. The exercise carried out in 1990 to set up the National Security Council, during the Prime Ministership of Mr V P Singh, turned out to be another version of the Committee of Secretaries with the Cabinet Secretary at the top. An organisation like that can never be a NSC. The point I stress upon is that it is the bureaucracy which is the greatest impediment to improvement of intelligence.

SUMMING UP

Chairman

In my experience, the aspect of co-ordination - which is a major decision seat in the intelligence agencies and the system they function in - is lacking, because of the ego syndrome of the individuals and organisations concerned. This has to be removed. We have had signal successes when this has been done. For example, in terrorist-infested Punjab, we played a major role in eradicating terrorism with very close association with all intelligence agencies. We were able to achieve success, yet no word ever came in favour of the Army either in the press or anywhere else. Unfortunately, this aspect is lacking at present in Jammu and Kashmir.

Regarding the intelligence officer's way of thinking, whether he has freedom of thought or not: when I enquired from an intelligence officer as to the reasons for their openly stating that Mrs Gandhi would win the elections post-Emergency and that too with a fantastic majority, when even the local Congress workers at the lowest strata were sure of

not winning, he replied that Emergency was not good for the country, and the intelligence set up functions in accordance with their conscience also and hence they did what they did.

Certain areas are worrisome in the future. We were aware of Pakistan acquiring nuclear weapons, missiles, etc., from North Korea and China. But we were not sure whether Pakistan would be able to and had the technology to explode nuclear weapons. Did we have this information as an intelligence input? If so, was the Government, which had resisted all our [military's] emphasis since 1964 for India to go nuclear, aware of this danger across the border? And what did they do about it? Or did they not know or did not believe what the intelligence said? Did we know, for example, that there would be rising nexus between the United States, China and Pakistan, especially when we believe in not harming anyone? Yet, obviously, when other states get together, they have a different perception. So, what is this perception?

The next point is whether our military is satisfied with the kind of intelligence that is acquired? What this boils down to is the depth to which you as a military person are permitted to acquire intelligence across the borders, vis-a-vis what the R & AW has to do. Not being satisfied with the intelligence output, whatever the sources, we are keen on getting deeper into the areas of our neighbouring countries from the intelligence point of view and we have been working very hard on that subject. But that is not accepted by the book of rules, which has laid down a specific mileage system. The equipment is getting better and the acquisition capability is getting deeper - be it satellite or radar and so on. This requires careful thought.

On the matter of whether intelligence is limited to the lower ranking officers of the Armed Forces: if one is a Corps

Commander, he will require a range of 300 to 400 miles into the enemy territory to observe movements and plan. The military brain functions on what kind of equipment and organisation the other side has, how is he likely to place these and what is likely to happen in a conflict. He wants the intelligence to confirm or not confirm the way the enemy has reacted. This intelligence is not easily available to him. This part is thus tactically or military strategically oriented.

In the larger, national, context whether we should or should not go to war - what will be the international opinion? There the level of intelligence will have to be in the diplomatic sphere. And there has to be a meshing of these two. I don't think the military is satisfied yet.

On the question of action versus acquisition: an intelligence agent acquires, he may not be able to act. The intelligence agents start certain actions in undercover techniques. For example, the CIA making war on Cuba some years ago. You have other intelligence agencies, including ours, acting in other countries. You have neighbouring countries' intelligence agencies acting in ours. This is a secret war - be it insurgency or whatever. Therefore, counter-intelligence and aspects of intelligence from civilian agencies become more and more important. As far as the military is concerned, it is not fashionable to go to war these days - it is too expensive. Therefore, the aspect of conflict itself is becoming an intelligence operation. This must be kept in mind when we are thinking of the type of intelligence organisation we want.

Finally, intelligence is the business of being a little suspicious about everything. And one has to constantly think what an adversary would do and how. It is this which indicates the directions one should focus upon. However, at the end of the day, successful action upon a good piece of intelligence depends on a large slice of luck.

THE CHALLENGES FOR ACQUISITION, ANALYSIS AND DISSEMINATION OF INTELLIGENCE IN EARLY 21ST CENTURY

SECOND SESSION

Chairman	:	**Lt Gen K K Hazari, PVSM, AVSM (Retd).**
First Paper	:	**Maj Gen Y Deva, AVSM (Retd).**
Second Paper	:	**Cdr U K Thapa.**
Third Paper	:	**Maj Gen M Bhatia.**

Restructuring of Intelligence Agencies

Second Session : **The Challenges for Acquisition, Analysis and Dissemination of Intelligence in Early 21st Century**

Chairman
Lt Gen K K Hazari, PVSM, AVSM (Retd)

This session is more on the conceptual plane and hopefully should form the basis on which future intelligence policy and intelligence organisations are created. We have three speakers. The first one is Maj Gen Yashwant Deva - perhaps one of the most experienced and qualified retired officers in the area of strategic electronics and electronic warfare. The second speaker, Maj Gen M Bhatia, is currently the Additional Director General Signals Intelligence. The third speaker is Cdr U K Thapa, who is the Deputy Director Intelligence in the Naval Headquarters. The two Discussants are Shri K K Mitra, an IPS officer who has served with the Cabinet Secretariat for a considerable amount of time, dealing with national security and intelligence. He was the Director of the Aviation Research Centre and subsequently the Principal Director Security; and Shri Bharat Karnad, Research Professor in the Centre for Policy Research.

Restructuring of Intelligence Agencies

Second Session : **The Challenges for Acquisition, Analysis and Dissemination of Intelligence in Early 21st Century**

First Paper

by

Maj Gen Yashwant Deva, AVSM (Retd)

General

If a SWOT analysis were carried out of our intelligence apparatus; the intelligence doctrine, as is taught; and, the intelligence management, as is practised; weaknesses and threats would prominently stand out, and strengths and opportunities would somewhat pale to insignificance. Our deficiencies have been well explicated in the approach paper. However, it will be pertinent to reiterate and re-emphasise them, viz.:

* The intelligence apparatus, in our case, is not formalised. Absence of charter and delineation of responsibilities leads to wasteful duplication, one-upmanship, a marked tendency to tread on each other's toes, and to pass the buck in case of a failure.

* All-source intelligence is woefully wanting as a substantive element of achieving national policy objectives. Instead, too much of budget and human resources are wasted in gathering information, which is available from open sources or is held by other intelligence agencies and government departments within the country.

* Most of the analysis is subjective, because it relies on human memory of the precedent and the relevant.

* There is no national policy on cryptography and cryptanalysis.

* The intelligence community is grossly ignorant of the modern tools of information technology, such as warehousing, archiving and retrieval. These have not been adopted because, apart from lack of awareness, there is absence of technically trained manpower within the intelligence organisations.

Let us look at intelligence as a product, the creation of which involves the classical processes, first, that of collection of raw material or data, both from open and classified sources; second, its manufacturing or conversion into information and removal of undesirable matter; and third, marketing or distribution to the consumers of intelligence. All these three processes, as they pertain to intelligence, are in the throes of a paradigm shift. With the dawn of the 21st Century, these will undergo a sea change, heralding a widely different set of rules for the producers, practitioners and managers of intelligence than are valid as of now. Collection of bulk of data would hardly pose a problem, particularly in the strategic realm. Much of it will be either available or sold in the open; whereas, analysis will demand greater rigour and elbow grease, particularly cryptanalysis.

Of certain, non-military threats to security[1] will increase and become more potent. This will be a new ball game, demanding new doctrine, assigning different kinds of missions to the intelligence staff and field workers and fresh ways of training them. Whereas cryptography will be widely in use for e-commerce, Electronic Fund Transfer (EFT) and other Electronic Data Interchange (EDI), it will also be easily accessible to rogue actors, viz., cyber criminals, terrorists,

hackers and crackers. Steele writes, "Perhaps the most important aspect of information operations in the 21st Century is that it is not inherently military; instead, civilian practitioners must acquire a military understanding and military discipline in the practice of information operations."[2] A corollary to this adage is that cyberspace cannot be kept exposed to intrusion by rogue actors, and as the distinction between war and crime dissolves the military needs to assume a greater role to defend cyberspace in peacetime. It must, therefore, be involved *ab initio* in all facets of cyber security and intelligence gathering.

The burden of this paper is that intelligence is going through a metamorphosis. It is one of the seven forms of information warfare, and is inextricably linked to the other six, viz., command and control warfare, electronic warfare, cyber warfare, hacker warfare, economic warfare, and psychological warfare.[3] Averring what he calls "information peacekeeping" as the purest form of war, Steele opines that it "must rely almost exclusively on open sources and services available from the private sector;" and "suggests crafting of a new doctrine of national intelligence that places the critical classified contributions of the traditional national intelligence communities within the context of a larger global information community."[4]

Intelligence gathering, analysis and real-time dissemination have become more scientific and technical. So has intelligence estimate,[5] where it has been widely invested and influenced by virtuality in its varied manifestations. This demands the knowledge of information technology, in particular analytical processes and data base management. Another discipline, which will shape the future of intelligence, is cryptology. The knowledge of codes and code breaking will be fairly common and widespread.

These then are the challenges of the next millennium

that the intelligence community will be faced with, and will obligate novel ways to cope with.

Hypotheses

In the 21st Century, there will be a marked shift from Humint to Techint; the importance of the former will gradually wane, whereas that of the latter will exponentially increase.

Much of the useful intelligence will be available on cyberspace over open-source media. This will be true of information pertaining to even closed societies like China.

Information Technology (IT), Artificial Intelligence (AI), Virtual Reality (VR) and Enhanced Reality (ER) will lend new molars to intelligence, and will accord it capability to analyse the intangibles, e.g., feelings, mindsets and intentions.[6] Besides, these frontier technologies will endow humans the ability for speech recognition and breaking language barriers,[7] which hitherto have been the principal limitations, beset by non-availability of language experts, and wastage of too much time in translations and transcriptions.

There is a paradigm shift from exclusive government domain intelligence to public domain intelligence. As businesses globalise and customers proliferate, economic and technological intelligence will acquire greater importance and require wider dissemination; in other words, the intelligence market will expand belying all expectations.

Emergence of information highways, lack of stringent cyber laws, and absence of legal experience and universality in their application, and adoption of the "Right to Information" as the fundamental right, will breed professional hackers and crackers on the one hand, and put counter-intelligence and electronic security to greater burden on the other.

PARADIGM SHIFT

From Humint to Techint

As technology leaps forward, it will replace human intellect in many ways. It already has a distinct edge in memory, storage, easy recall, and what is highly significant, objectivity. The Humint is prone to lie,[8] whereas Techint is unbiased, impersonal and scientific, although admittedly either can be duped. The former is invaluable in counter-intelligence in keeping a check on moles and insiders, whereas the value of Techint lies in remote collection of intelligence, sensor diffusion, virtual analysis, faster processing and dissemination in near real-time. The two should complement each other, with gradual lessening of the importance of the former.

With exponential growth in technology over the past few decades, we have the ability "to transfer more information, at a much faster pace than hitherto, to more people, and in a customised manner than ever before."[9] We have the ability to gather and process unheard of volumes of data to derive potentially useful information. There are estimates that by the year 2008, it will be possible to have almost complete battlefield awareness of a region 200 miles by 200 miles in a military style conflict.[10] If that is the prognostication for the military aspects, imagine what will be possible for non-military aspects.

From Data to Wisdom

Information is a notch on the spectrum with raw data on the low-end and wisdom on the high-end. The raw data, when processed, becomes information; information minus

noise (irrelevant substance) is intelligence or understanding; intelligence plus experience is knowledge; and knowledge, when further processed, endows erudition and the ability to philosophise, and so becomes wisdom. This is illustrated below:[11]

Processed Data ——————————Information

Information	(–)	Noise	= Intelligence
Intelligence	(+)	Experience	= Knowledge
Knowledge	(+)	Judgement	= Wisdom

Information has both a narrow meaning in terms of processed data and a wider expressive, which spans from raw data to true wisdom.[12] Intelligence can be either perceived as a midway point between data and wisdom, or can be interchangeable with the term "information." Its span of interest is certainly not confined to what pertains to the enemy or the target countries and groups, but also embraces the environment and own forces.

Technology has come a long way from processing data to processing knowledge. Knowledge is power in the information age, and we have set the goal of becoming a superpower in IT in a decade.[13] We can gain information advantage vis a vis our adversaries and competitors only by observing what is happening, understanding the nuances and the dynamics of a situation, deciding what to do, and then acting on it in quick time.

From the Government Domain to the Public Domain

In the 21st Century, intelligence will not be the monopoly of the government. In a few years hence, there will be little difference between intelligence systems in the field, those in the police control room, or in the corporate office of a private enterprise. As it is, the hardware, viz., the processor and the

communication interface are the same; so are the office automation suites. The difference is only in the application software, content and its bias. Besides intelligence pertaining to their particular speciality, all government ministries and departments will need non-exclusive, shared and generic intelligence. In the case of the Ministry of Defence and the Defence Services, this will be all the more true, and certainly more demanding. A visible trend in some of the developed countries is privatisation of intelligence and hiring of professional hackers and crackers.

The universal connectivity and the "Right to Information" will, in all likelihood, lure the media to emerge as both the repository and the major consumer of intelligence. Intelligence agencies will need to pay greater attention to public relations and media management. Investigative journalism is both a threat and an opportunity. It can be guided, although, admittedly, it would need a high degree of finesse.

From Guesswork to Scientific Analysis

AI, VR and ER are supporting concepts, and a solid foundation for informed policy-making, judicious acquisition management, effective contingency planning and execution, and timely public consensus-building.[14] Intelligence is a function of the human mind, which is divided into cerebrum, cerebellum and medulla. The cerebrum performs the computation functions and is the highest seat of decision-making. Raw data captured by a sensory organ travels from neuron to neuron in a digital mode. On reaching the cerebrum, data diffusion takes place and the data is strained, treated and preserved. The intelligence, or the processed information, sans noise, is then passed on to the action addressees, the human organs. Reasoning, memory, experience and judgement are functions of the cerebrum, which the machine is learning to replicate through processing,

storage, retrieval, recall, simulation, AI, and VR, and has achieved a spectacular degree of success. The other two parts of the brain are no less important. The cerebellum performs the control function as in C2 and its responses are automatic. The medulla takes over decision-making in an emergency and responds to dangers and threats in real-time.

Intelligent systems encompass several hardware and software features with the ultimate objective of building mechanisms that autonomously adapt their functionality and enmesh, without human operator intervention or pre-programmed logic constraints, in response to changing requirements. Intelligent systems can be implemented in software on general-purpose digital computers or on specially designed analogue or hybrid analogue/digital neural networks and fuzzy logic chips. Military applications are in smart sensors and autonomous platforms and weapons, according them the potential for greater mission effectiveness. Intelligent systems are needed as part of battle management and C3I systems to increase ability to detect, localise, and effectively engage enemy forces in a high-threat, target-rich environment. There is world-wide research in machine intelligence, much of which is still theoretical and in the area of machine cognition, per se.

COLLECTION

Open-Source Intelligence

Open sources are, by definition, sources that are legally and ethically available to anyone.[15] The Indian establishment routinely spends large sums of money on gathering intelligence, which is available for the asking on the Internet and can be freely downloaded. Some of the sites have a vast cauldron of useful information, e.g., Intelweb,[16] antiOnline,[17] and the officially put out web pages by other intelligence

agencies. There are open discussions on intelligence issues,[18] Internet Relay Chats (IRC), and the Bulletin Boards put out by both official and non-official organisations. Besides, publications like the *Jane's Intelligence Review* and IDSA's *Strategic Digest*, the *International Defense Review*, and *Jane's Defense Weekly*[19] have a fund of useful material, but ironically, these are read largely by the retired and seldom by the serving. Commanders, at all levels, are dismissive of the opportunities inherent in open-source collection, and the challenge of analysis conducted by them; instead, they rely on mundanely churned out intelligence summaries. In the US, as elsewhere, much concern is expressed on expensive and narrowly focused collection systems. This failing is highlighted in every major review that the US Intelligence Community[20] has been subjected to.[21]

It is estimated that less than 10 per cent of what is collected on both the imagery and the signals sides of the technical collection function is processed and disseminated timely.[22] The recent intelligence goof-up by the CIA, in not detecting India's preparations for the nuclear tests, is a telling case. The former Vice Chairman of the Joint Chiefs of Staff, Admiral David Jeremiah, who headed the panel that investigated the intelligence lapse, acknowledged that, "both the intelligence and policy communities had an underlying mindset."[23] Analysts assumed that the BJP would not follow through with their election campaign rhetoric once in office.[24]

The Commission on Intelligence, a bipartisan endeavour that included members appointed by both parties of the House and Senate, as well as members appointed by the Administration, offered two pertinent recommendations.[25] Firstly, the US intelligence community is "severely deficient" in its access to open sources, and this should be a "top priority" for both Director Central Intelligence's (DCI) attention, and funding. Second, the consumers of intelligence

should not refer requirements to the US intelligence community when they can be answered "predominantly" through open sources, but rather should create their own open source intelligence.

These two recommendations clearly document the fact that the vast majority of usable, relevant information necessary to support policy-makers, acquisition managers, and commanders, is available in unclassified form from private sector sources. The greatest obstacle to improved use of open sources is not that of access, which is freely or inexpensively available to all, but rather that of acceptance.[26]

What is true of the US is equally true of India. To us, a variety of open sources are available, which can be exploited effectively. We have the advantage of sharing the English language with a large part of the globe, then there is a sizeable NRI population, who can be a good source of legitimate technical and commercial information. There are common interests in sharing intelligence about threats other than military; common training programmes, seminars and symposia in which the academic and professional communities interact and exchange information. Within the country too, information is widely available in government departments and other sources, viz., the media, universities, information brokers, and businesses, both in the public and private sectors. "It is absolutely essential that each intelligence producer and consumer has a "map" of this larger knowledge terrain, and a strategy for assuring the ability to discover, discriminate, distil, and digest critical open-source information and intelligence."[27]

Those familiar with the existing security and isolationist policies of the military and the elitist behaviour of civil policy makers will recognise that there are enormous obstacles to treating the new customers as equal partners in intelligence

sharing. Further, a crass ignorance of what is available in the private sector and with the NGOs, and a reluctance to reveal the intelligence agenda or divulge its rather obvious interests, cause many to shun the benefits of open-source intelligence.

High-tech Intelligence

While being critical of all the major intelligence agencies,[28] Goodman has a word of praise for the National Security Agency. He writes:

"Only the National Security Agency (NSA) earns consistently high marks for protecting the nation's security and, at the same time, contributing to its technology. NSA not only dissented during several international crises, when the CIA and the Defence Intelligence Agency (DIA) had it wrong, particularly in the Middle East and East Europe, but has been on the cutting edge of US technology for decades. NSA contributed directly to the first transistorised computers, semiconductors, high-speed circuitry, and microelectronics; it financed some of the supercomputers designed by Seymour Cray and developed technology that may crack the ultimate code - DNA, the genetic blueprint of life itself. NSA may be the largest and most expensive intelligence agency in the history of civilisation, but it is a model of innovation and invention."[29]

Goodman's observations are a testimony to the supremacy of Techint. We must also draw a lesson from the fact that in the US, this agency functions under the defence department, as indeed it should.

The US spends 10.5 billion dollars annually on tactical intelligence as compared to 3.1 billion dollars on the CIA, 2 billion dollars on the DIA, 6.2 billion dollars on the National Reconnaissance Office (NRO) and 4.0 billion dollars on the

NSA.[30] For tactical intelligence too, the bulk of the money goes to Techint, which in our case is grossly neglected. All-source intelligence, be it at the national, strategic or tactical levels, demands greater attention on acquiring assets for early warning, surveillance, reconnaissance and target acquisition. To this erudite audience, I need not dwell on these. However, three areas in which new innovations have made an impressive debut elsewhere, and where we are still floundering, are:

Global Positioning System (GPS). Intelligence about own position is a vital requirement. GPS technology has its roots in the US Department of Defence (DOD) programmes and now thrives in the commercial sector. GPS is a space-based radio-positioning and time transfer system. It provides extremely accurate, 3-dimensional position, velocity and time (PVT) determination. It has two versions, the military and the civilian. The former is highly precise but is not available to us. GPS is on a world-wide common grid, which can be easily converted to local datum. It is passive and permits all weather operation. It provides real-time and continuous information, and survivability in a hostile environment. Dozens of vendors are working on tightly integrating GPS technology and mapping software with notebooks, handheld computers and cellular phones.

High Resolution Direction Finding. This has been included as a strategic electronics thrust area for the 9th Five Year Plan.[31] Lack of angular and spectral precision in direction finding is a serious gap in exploitation of Sigint and ESM systems. The requirement extends to all frequency bands of the electromagnetic spectrum and different types of electronic emissions. This requirement is for crime detection, security monitoring and intelligence gathering and is not exclusive to wartime applications. We experienced its inescapable need during operations in Sri Lanka and continue to feel the

handicap in Jammu and Kashmir in tracking the militants. The intelligence agencies have earned enough ill fame in chasing the likes of Prabhakaran and Veerappan. We need to wash this stigma by acquiring precision capability in DF, besides Speech Recognition.

Data Fusion. This is another high-end technology, requiring competence building, which has been included as a thrust area in the current plan.[32] Derivation of a tactical picture showing identity and position of all friendly and hostile forces in a combat area is a distinct requirement in C2 systems. Likewise, data collected by a multi-sensor signal intelligence system has to be culled and blended in real time with a view to forming an intelligent picture or as an ESM support system as a prelude to mounting electronic counter measures (ECM) or electronic counter countermeasures (ECCM). An example is the UK's Nemesis Fusion System, which produces a fused Recognised Air Picture (RAP) in real time, culling inputs from a wide variety of combat systems.

ANALYSIS

Cryptanalysis

Cryptanalysis is the most critical facet of intelligence. Cryptology functions fall under two heads, cryptographic and cryptanalytic. Both these were highly classified hush-hush affairs of the government. The former was handled by the communications man, the latter by the intelligence; and the twain never met. In a complete reversal of the process, and in tune with the times, the Government of India has issued instructions that, "cryptology and cyber security knowledge and experience developed by the Defence establishments shall be suitably transferred to the civilian information security agencies for wider dissemination in the country to increase information security, network security

and to bring about a greater degree of secure use of EFT, digital signatures etc."[33]

In the Services, cryptography was dealt with by semi-experts, risen from the ranks, who were employed in such tasks more because of experience than any worthwhile in-depth knowledge of the subjects. Their merit, however, lay in high integrity and an immaculate sense of secrecy. Cryptanalysis and cryptographic research were, by and large, handled by the Scientific Analysis Group (SAG) and the Joint Cipher Bureau (JCB). It is only recently that some universities have adopted these vital subjects for scholarly research and research papers have started appearing in academic journals.

In the US, these functions are the responsibility of a single agency - the NSA. It is tasked to provide timely, user-friendly, and reliable signal intelligence on the one hand, and information systems security and counter-intelligence solutions on the other. A similar organisation is badly needed in India, too. It could furnish the leadership, provide services to protect national security and sensitive information, foster a broad zone of co-operation between the government and industry, establish key infrastructure technology and standards, and expand collaboration on strategy for containing information system vulnerabilities.[34] It could also run a centre for technical excellence for information operations, which could be endowed with warning capabilities, and help in achieving information superiority by providing technical expertise to exploit adversary's information and information systems while defending own.

The threat to our information systems will grow in the coming years as cyberspace expands, the enabling technologies to attack these systems proliferate and hostile groups and countries, not well disposed to India, develop new strategies that incorporate such attacks. The cryptosystem that we opt for is a vital national resource and we have the

right kind of expertise to develop it. The problem, however, lies in its integration in the planning and conduct of military operations, and its availability for EFT and prevention of fraud. It is fully recognised that activities like electronic commerce, banking, stock market, insurance, even medical services cannot be conducted online, unless there is total confidentiality and protection from disclosure and tempering. While encryption technology can help protect business secrets and unauthorised release of personal information, it can also be used by terrorists, drug traffickers, and other criminals. We may draw lessons from the US Administration's insistence on the adoption of escrow approach[35] and the arguments that it has been putting forward to the legal authorities in defence of retaining cryptanalytic capabilities for law enforcement. "Clipper Chip"[36] developed by the NSA has escrow provision; it seeks to allow the law enforcement agencies to monitor any private conversation or confidential data on financial and other records. Although approved by the Administration, this has been challenged in the courts.[37] The US Administration claims that there are no restrictions on the domestic use of cryptography, but export controls are necessary for national security reasons.

It is not easy to decode messages as is commonly believed. An approach that is frequently suggested is to provide the law enforcement agencies greater computing power. It is true that, theoretically, all encrypted electronic information can be decoded if enough computing cycles are applied, but in practice this does not work. The US Administration advances five reasons for its unworkability:[38]

First, it relies on mathematical theory, not operational reality.

Second, after the decoding problem is isolated, acquiring a machine to decode is neither easy, nor inexpensive.

Third, this approach betrays a misunderstanding of how crimes are prevented.

Fourth, this approach fails to acknowledge the volume of messages that could need decoding.

Finally, revealing the precise capabilities of law enforcement agencies to decode messages, as would be necessary in order to present the fruits of that work as evidence in court, could provide a tutorial to criminal elements bent on eluding law enforcement.

According to a report prepared by the National Research Council for the US Congress, entitled "Cryptography's Role in Securing the Information Society," cryptography helps rather than hinders national security by protecting elements of the civilian infrastructure — stock exchange, banking, telecommunications, air traffic control and so on."[39] The Committee, even though constituted of individuals with diverse interests and stakes, arrived at a consensus in recommending private cryptography and felt that the "current national policy -- which discourages the use of cryptography despite its many valuable applications -- can at most delay its spread."[40] Even if the US Administration accepts the report and acquiesces to its recommendations, it cannot be a model for us to emulate. We do not have the resources to monitor abuses. As it is, we find it difficult to prevent the likes of Sriperumbudur and Purulia. With access to private cryptography, terrorists and militant groups would wreak havoc.

US cryptography policy and the arguments of its supporters and detractors are relevant to our discussion too; for their similarity of approach to investigation of crime and terrorism and contrariety of interests to key recovery encryption as part of US export control strategy. The Clinton administration is cognisant of the new opportunities that IT

offers to the enemies of the state, crooks, swindlers, embezzlers and other anti-social elements like porno peddlers and drug traffickers. It is willing to promote cryptography, but has serious reservations on unbridled spawning which may degenerate into illegitimate use on the one hand, and hinder the state in preventing, investigating and prosecuting crime on the other. Technology serves the enterprising, both the benevolent and the malevolent kind. It can be of great help to the latter in prying and spoofing trade secrets, individuals' confidential records or the state's sensitive documents. There is a growing recognition "affirmed by the National Academy of Sciences, that the use of encryption to conceal illegitimate activities, poses a problem for society as a whole, not just for the law enforcement and national security."[41]

These ground realities are equally applicable to the Indian setting, adversely accentuated by the fact that there is rampant ignorance and apathy towards the issues involved. Besides, the kind of computing power required for Sigint[42] is just not available. The LTTE used simple encryption to conceal their transmissions, yet it took time and effort to decipher them, and the public is still not sure whether this inadequacy led to Rajiv Gandhi's assassination. Wiretaps are frustrated even in the case of the US, where despite an extensive code-breaking set-up, they have run into failures. Cryptanalysis is a gruelling and frustrating job. Besides, the entire issue is shrouded in the question of legality and ethics. Tapping of telephone lines and eavesdropping invite emotional repulsion too. It is widely believed that unfettered powers to the State are likely to be abused and the targets are invariably political opponents.

Virtual Environment and Analysis

In the 21st Century, we shall be operating in a virtual environment, with a hierarchy of powerful computing

capabilities widely available to individuals, organisations and intelligence production services. Computers will be physically interconnected to very high-bandwidth networks, viz., Local Area Network (LAN), Wide Area Network (WAN), Metropolitan Area Network (MAN) or Intranets. It will enable large volumes of near-real-time multimedia information to be produced and distributed very quickly to selected consumers as well as being available on a "pull" basis to the rest of the community.[43] Advances in remote telecommunications access technologies allow instant connectivity to these resources without a permanent affiliation.

Sophisticated interfaces that "incorporate advanced cognitive ergonomic design concepts"[44] will certainly make a debut. The advances in Human Computer Interface have enabled Social User Interfaces (SUI) that anticipates information requirements depending on the types of problems that are being worked on, the context and past requests. They support a variety on collection and communication, synthesis and visualisation Knowbots.[45] Knowbots and other software agents greatly simplify the use of information technology. They act as templates that filter the information in accordance with prescribed rules and criteria. They are not just text retrieval processes but focus on concepts. Most of these Knowbots are active even when the user is not logged in.[46]

Alexander Chislenko suggests that it seems possible to augment human senses with transparent external information pre-processors. He calls it "Enhanced Reality" (ER). It could act as a highlighter whereby an object of potential interest could be made to stand out from its environment to catch attention. "The filters can amplify or otherwise differentiate i.e., move, flash, change pitch, etc.,"[47] to give enough time to focus on the object. "While such filters do not have to be transparent, they may be a way to provide a natural feeling

of augmented perception."[48] Some non-transparent filters have found their way in military applications. Called "target enhancements,"[49] they allow military personnel to see enemy tanks and missiles conspicuously outlined and blinking.

Perception utilities could "build on existing techniques that present us with recordings of the past and forecasts of the future to help people develop an immersive trans-temporal perception of reality."[50] One may expect that in the 21st Century, there will be greater interest in application of ER technology to improve interaction with real objects, while VR with 3-D simulation can provide training environments. It should be possible to virtually visit the Corps Commander's Conference in Rawalpindi as ER entities endowed by the archived and live recordings of the physical world, and be privy to the decisions, e.g., predict which corps commanders would resign in support of the ousted Chief. One could visualise intelligence analysts to interact through ER extensions as if they were parts of the real world, thus elevating ER entities from individual perceptions to parts of shared, if not objective, reality.

A degree of expertise has already been acquired in video morphing.[51] A time may come when, to an intelligent observer, an object of interest will be entirely artificial, with no inherent "natural" appearance. Image modification techniques then may be incorporated into integrated object designs that would simultaneously interface with a multitude of alternative intelligent representation agents.[52]

The implementation of ER extensions would vary depending on the available technology. We may be at the threshold of an era of comprehensive and conscious self-engineering. The advancement of human input processing has immense possibilities. "Migration of human functionality beyond the boundaries of the biological body, will make human identity increasingly exosomatic i.e., non-biological."[53]

With ER, Techint will acquire a new face and emerge as one of the most sought after intellectual pursuits. Today, hacking and cracking is popular; tomorrow, it shall be the VR and the ER analyses. Agents provocateurs and 007s are out of fashion, and soon maybe out of job.

DISSEMINATION

New Market

"The four consumer communities — the policy-makers, the acquisition managers, the commanders and their staff, and the public — each require tailored intelligence, most valued, when it is concise and to the point."[54] In the past, intelligence organisations at the national level have only catered to the policy maker. They have been, somewhat, lukewarm to the needs of the acquisition manager and the commanders and the staff in the field. As to the public, less said the better; the attitude has been dismissive on purpose, if not hostile. The times are changing. The intelligence staff needs to work closely with all the customers and improve interoperability to ensure that tailored intelligence and security products and services meet the customers' approbation, both in quality and timeliness. The public must be treated as a real-time partner in decision-making in foreign, domestic and, even defence policies.

Ninety per cent of the information reaching a typical consumer, whatever be his level and importance in decision hierarchy, is unclassified and unanalysed.[55] Bulk of it comes through the TV, the radio and the newspaper. Further, neither the consumer nor the producer of intelligence has yet developed "a capability for discovering, discriminating, distilling, and digesting intelligence within this overwhelming information environment replete with multiple sources of conflicting information."[56] Besides, consumers tend to suffer from information overload and fatigue.[57]

Policy makers require open source intelligence that gives responses and reactions to their decisions from the public. The public, on the other hand, has to be constantly fed with intelligence from reliable government sources about the rationale of foreign and domestic policies. It is a failure of the intelligence that the euphoria generated by Pokhran II was allowed to wane, and not suitably harnessed. Public perceptions of the dangers to national security are not the same as that of the government. This is because the public is not recognised as a legitimate consumer of information, and is left to the vagaries of the media. In the days gone by, kings and rajas engaged spies to assess their popularity and gain intelligence about the public reactions to their governance. They even spin-doctored popular sentiments and garnered public support to a particular response option to a crisis.

Another vital consumer is the businessman. It is significant that China, though a socialist country, has greater awareness about gathering, sifting and distributing market intelligence, than we, who boast of greater commitment to liberal economy. Economic espionage is China's forte. It now ranks as the biggest threat for American firms, eclipsing Japan and France. The ranking is the result of a yet unreleased survey conducted among 1,300 major US companies by the American Society for Industrial Security (ASIS), an association concerned with corporate security.[58] "Chinese industrial spying is believed to run the gamut from routine competitive intelligence gathering... to the theft of company trade secrets from offices and labs."[59] One does not have to emulate China in this respect. There are legitimate ways of gathering economic and market intelligence and this should be an agenda for the external intelligence.

Commanders need access to unclassified open sources for area study, contingency planning, civic action and

assignment of missions for classified collection. It is erroneously believed that their interests are confined to military intelligence. In the 21st Century, the importance of Infowar will grow, and epistemology[60] and situational awareness will command knowledge on every conceivable subject.

Customer Relationship

"There is no phase of the intelligence business which is more important than the proper relationship between intelligence itself and the people who use its products."[61] Oddly enough, this relationship, which one would expect to establish automatically, requires a great deal of conscious effort and public relations to do so. The policy should drive intelligence, not the other way round. The burden of establishing this mutual understanding between the intelligence operator and the user falls on the latter.

Policy-makers need support from intelligence to help deal with uncertainty and rely on analysts who appreciate this aspect of the decision process. Analysts are useful only when "they clarify what is known by laying out the evidence and pointing to cause-and-effect patterns; carefully structure assumptions and arguments about what is unknown and unknowable; and bring expertise to bear for planning and action on important long-shot threats and opportunities."[62] Intelligence must be integrated more closely with other functions of government, such as law enforcement, to achieve shared objectives.[63] Further, in a mixed economy, intelligence has another vital mission to perform, that is to keep the economic directorates and the ministries informed of the state of the economy in target and competitor countries.

Uncertainties can be addressed by the expert systems, so long as the data is scrupulously and objectively stored.

"Intelligence products that emphasise prediction over explanation and opinion over evidence," have little use for the policy maker.[64] There is need to expand "pull" dissemination capabilities[65] to enable policy maker or the customer to initiate real-time requests for intelligence in response to emergent requirements to manage crises. Obviously, this demands interactive databases, and highly developed warehousing and retrieval software. Information mining is an art, requiring, firstly, a filtering technique to get the right information, and, secondly, the knowledge where the resources are available and how the information is stored. It should enable the customer to initiate a single request and the system to search all the databases of the intelligence conglomerate for the right answers. One way to cut down on queries is to list FAQ (Frequently Asked Questions), which has become increasingly popular on the Internet.

"The Intelligence Community has to get used to the fact that it no longer controls most of the information."[66] We can neither rely exclusively on classified sources for the bulk of intelligence, nor can the users or consumers take it for granted that their intelligence needs will be met by the agencies as they have traditionally operated. This is true of the military commanders and the staff, too. Each consumer entity should have its own database, a part shared with the others, a part not shared. The size of the latter must be kept small in order to avoid compromises.

Intelligence Flow

As communications break the chain of command, the hierarchy, too, will no more shackle the intelligence. There is convergence towards unique structures that permit intelligence to flow. The answer to co-ordination, posed in the approach paper, lies in networking. Systems will blend because of sharing of databases and the reach of

communications. Policy makers at the national level and commanders in the field will see the same "data". The possibility of "zoom in and out or drilling into and out of areas of interest will continue to make the present notion of tactical and strategic intelligence somewhat ambiguous".[67]

Obviously, drastic changes are in the offing in the way information flows and its real-time dissemination. The information revolution sets in motion forces that challenge the intent and purpose of many institutions. Intelligence organisations cannot be an exception, more so, as they themselves are the dispensers of information. Communication connectivity, networks and highways disrupt "the hierarchies around which institutions are normally designed;"[68] and lead to crossing borders, redrawing the boundaries, besides, compelling the closed systems to open up".[69]

Cartographic Intelligence

Distribution of maps and their availability for operations has been India's Achilles Heel. The defence services have been launched into operations without maps and geo-spatial imagery. Even when maps were available, their distribution was miserably faulty, and was the cause of many of our failures. There cannot be a second opinion on the urgent need to address this failing.

In the US, the National Imagery and Mapping Agency (NIMA) looks after coherent management of US imaging and mapping capabilities. It was created as a combat support set-up of the DOD in 1996. It combines unto itself the Defence Mapping Agency, the Central Imagery Office, the Defence Dissemination Program Office, and the National Photographic Interpretation Centre in entirety; and imagery exploitation, dissemination and processing elements of the DIA, the NRO, the Defence Airborne Reconnaissance Office (DARO), and the CIA, in parts.[70]

We have created an organisation for production of digital maps and imagery. However, this alone may not meet the expectations of the commanders and the staff in the field. A real-time imagery transfer system is badly needed. We have the capability to put it in place; it is merely a question of will to opt for non-ruggedised commercial hardware. There will be exacting demands on timely, accurate and precise imagery and geo-spatial intelligence for an appropriate response to the future environment, be it for national decision-making or military operations.

The Government has accepted the views of the Task Force on IT and SD (Software Development) and has directed that the "recommendations of the TG-MAP committee for map and GIS (Geographic Information System) data policy approved by the Committee of Secretaries under the Cabinet Secretary shall be notified by the Ministry of Defence expeditiously."[71] Desirable as it may appear from the larger interests of the country, open circulation policy, without monitoring of the distribution system, could be a matter of serious concern. Invariably, maps of sensitive areas first land up with the terrorists and spies, before they reach the legitimate users.[72] Besides, we must not forget that India has been a victim of cartographic aggression in the past, and we need to remain ever vigilant on that score.

COUNTER INTELLIGENCE AND NETWORK SECURITY

The primary threat of intelligence gathering comes from the ISI of Pakistan and *Gujia Anquan Bu* of China. Whereas the activities of the former are widely publicised, little is known or discussed about the latter. Chinese capabilities of organising and conducting espionage are highly refined. In a façade of innocent denial, China has been gathering vital information and has concentrated on economic and

technology spying to the same degree as it does on politico-military affairs, using professionals, students and scientists. "Significant damage is done by 'freebooters' who pass on information to curry Beijing's favour or, as is often the case, for profit."[73] The extent of chicanery of this agency can be gauged from the fact that it penetrated the US political system and financed the democratic elections, allegedly taking its pound of flesh in return. While spying in the Western countries is more to technology snooping, particularly in the fields of IT, biotech and defence industries, in India, its nefarious designs are to spread misinformation, create disturbances, destabilise the country's political system and not to let India emerge as a competitor.

The CIA and the NSA of the US are equally active in India, their main interests being India's progress in sensitive technologies and military preparedness. The former has a large presence in the form of moles and conscience keepers in almost all the government departments, the media, industry and political parties, while the latter's focus is on communications and information technology(IT). Since the eighties, it has been running a project called "Echelon" in conjunction with the Sigint organisation of four of its allies from the "white" Commonwealth countries. The five co-operating agencies are:[74]

National Security Agency (NSA) of USA.

Government Communications Headquarters (GCHQ) of UK.

Government Security Establishment (GSE) of Canada.

Defence Signal Directorate (DSD) of Australia.

Government Communications Security Bureau (GCSB) of New Zealand.

"Echelon" intercepts e-mail, fax, telex and telephone conversations and its targets mostly are non-military, viz., governments, organisations, businesses and individuals, virtually in every country. It conducts bulk, indiscriminate interception, and uses computers to identify and extract messages of interest. Intercept facilities have been established around the world, which enable it to tap all the major components of the telecommunication network,[75] even track individuals, as they switch networks. A case in instance is that of Osama Bin Laden.

The task of intercepting traffic of the countries of South Asia is handled by the agencies belonging to the US, Australia, and New Zealand. Besides collecting intercepts through Intelsat, the focus of communication intelligence (Comint) has been on microwave networks converging on the metros through facilities installed at the embassies. All code-breaking tasks are handled by the NSA.[76] Ever since Pokhran II, when these intelligence agencies were outsmarted, all eyes and ears are focussed on India.

Pakistan and China, too, are running an elaborate system of Sigint. The former has acquired a fair degree of expertise in hacking. The ISI is known to have employed amateur hackers to help spoofing and manipulating data on the Internet.

The task force on IT and SD has made certain recommendations[77] for liberalising the usage of radio and Internet access, which have been notified. Security has been given a short shrift. It appears that no advice was sought from intelligence or security agencies that have the experience of fighting cyber battles or conducting counter intelligence operations. The LTTE misused the citizen band, maritime frequencies, and HAM radio for passing illicit communication traffic. It intercepted radio traffic and telephone conversations

in Tamilnadu and other southern states. It procured walkie-talkies and components to make communication and interception equipment from the vendors in India. It ran so-called electronic workshops where it made radio controlled improvised explosive devices (IEDs). All propaganda material was churned out from the Indian soil and sent to England over ISTD, high power HF radio and other channels,[78] and our intelligence agencies turned a Nelson's eye to such activities.

It is a pity that we have refused to learn the lesson that electronics can be more deadly than explosives. Whereas, possession, transfer and vending of arms and ammunition are prohibited and laws pertaining to them are enforced, there are no restrictions on transmission and reception of subversive, criminal and anti-national information through electronic means. Whatever checks had hitherto existed are sought to be diluted. With the new provisions[79] coming into force, cyber crooks, spies, hackers and insiders will have a heyday, unless we are able to have security systems installed on the networks, make cyber laws, and create a deterrent monitoring set-up endowed with legal powers.

In India, the legal position regarding telephone tapping is given in a judgement of the Supreme Court that privacy is a part of the right to life and personal liberty enshrined under Article 21 of the Constitution. The Apex Court recognises that telephone tapping may be necessary to detect and prevent crimes, e.g., espionage, drug trafficking, gunrunning, and terrorism. Section 5 of the Indian Telegraph Act 1885 empowers interception of telephonic conversation in certain situations. This has often been misused and abused, and seldom invoked in the interest of national security. It is strange that for over a century, we did not consider it necessary to revise this dated and controversial act or amend its opprobrious provisions. The Apex Court has lent

safeguards to Section 5 (2) of this Act; viz., one, the authority to sanction tapping cannot be other than the Home Secretary of the Centre or the state as the case may be; and two, before passing an order the authority must determine whether the information sought cannot reasonably be acquired by other means. This historical judgement protects individual privacy and yet, concedes to the State the right to intercept under certain conditions.

RECOMMENDATIONS

In the 21st Century, knowledge of computer system architecture, data structures and algorithms, database management systems, networking, Internet and computer security systems are the barest essential. All intelligence officers, be they in the civil or military sphere, should have a thorough knowledge of information technology and should preferably come from information science stream or computer application stream. A sizeable proportion of non-officer cadre should undergo courses at Foundation (O Level) and Advance Diploma (A level) of the DOEACC, a scheme being conducted by the Department of Electronics. Intelligence organisations should shift their bias from Humint to Techint, and must develop expertise in distributed and parallel systems, modelling and simulation, real-time systems, advanced networking, image processing and computer vision, Cryptanalysis, AI, VR and ER, *inter alia* other subjects.

There is a need to create an intelligence organisation similar to the National Security Agency of the US, by pooling the Sigint resources at the strategic level, and placing under it a research group on cryptology. It should be responsible for all aspects of network security, and cyber policing as visualised in the report of the Task Force formalised in the Gazette Notification.[80]

Make interactive databases and adopt modern tools of warehousing, archiving and retrieval. The answer lies in opting for distributed databases with search engines for open information, and airtight centralised databases with well-controlled access for hard-core intelligence.

Create networks, integrating intelligence with policy-making and command and control functions. All diplomatic missions, intelligence offices and command posts should become paperless with computers and terminals laced with self-destruct capabilities.

A national policy on cryptography should be formulated and adopted. Cryptanalysis should be strengthened with appropriate organisational structure and high power computing assets.

A task force similar to the one on IT and software development (SD) or a commission similar to one on the Roles and Capabilities of the US Intelligence Agencies should be constituted with adequate representation from the defence services and technocrats to suggest a total overhauling of the existing intelligence organisations and review their working. Manpower should be severely cut down and instead, computing, real-time communications, and networking facilities appreciably increased.

There is a need for strengthening public relations and media support. Intelligence should return to its supportive role in the affairs of the government, whereas strategy, diplomacy, technology and economics should take over the lead part.[81]

Reliance on agents and human analysts should be reduced. Instead, greater importance and budgetary support should be lent to acquisition of sensors and processors and

adoption of scientific methods of analysis, including expert systems. Covert[82] actions should be eliminated, except where these are required for national survival. Greater stress should be laid on analysis, separating it from intelligence operations, so that analysis is independent and is not used to promote operations.[83]

Conclusion

The explosion of information technologies has set in motion a virtual tidal wave of change that is profoundly affecting organisations and individuals in multiple dimensions. As the cost of computing and communications has nose-dived, it is highly cost effective to adopt and utilise information technologies. This is particularly true of intelligence. Besides being not reliable, Humint is prohibitively expensive.

"Technology begets doctrine and doctrine begets organisation."[84] Technology is the start point for any review of the intelligence set-up. Its influence will increase and drastically impact on, both, doctrinal and organisational changes in the 21st Century. The Government of India has laid down the IT agenda. There are obvious lacunae in the policy from the security and intelligence point of view. While addressing them, let us not forget the goal of making India the IT super power. Intelligence will become more technology-oriented and whether we like it or not, the manpower recruited to the intelligence agencies, be they civil or military, will have to be highly technical.

Priority needs to be accorded to the creation of paperless offices and command posts, databases, and networks, including C3I systems and Intranets. Commercial hardware should be used with adequate network security. Emphasis should be on open source collection, curbing the tendency to

project information collected from an open source as classified intelligence. Covert actions should be confined to only those authorised by the policy maker. In the light of proliferation of hackers and crackers, the Government should clearly lay down policies on cryptography and cyber security.

We need to remove mutual distrust amongst the intelligence agencies and the tendency to "score" and to snoop on each other's data. We need to delineate the charters, scrupulously avoiding duplication. Responsibilities have to be clearly defined, jurisdictions decided and liabilities made known for the many tasks and facets of intelligence.

Finally, the public must be taken into confidence on activities of the foreign intelligence agencies[85] and efforts of own agencies to counter them. Public relations and media management is as important in intelligence as in other activities of the Government.

Notes

1. In his introductory remarks to the seminar organised by the United Service Institution (USI) of India and Jawaharlal Nehru university (JNU), Lt Gen Satish Nambiar describes the following as non-military threats to security: (i) International terrorism, (ii) Ethnic sub-nationalism, (iii) Economic pressures and trade wars, (iv) International trade in narcotics and narco-based terrorism, (v) Environmental degradation, (vi) New emerging infectious diseases like HIV/AIDS, and (vii) Disinformation or psychological warfare. See "Non-Military Threats to Security in South Asia," Proceedings of a Seminar organised by the USI and the JNU on 7-8 December, 1995, p. 2.

2. Robert D. Steele, "Information Peacekeeping: The Purest Form of War," in *Cyberwar: Myths, Mysteries and Realities*, (forthcoming), Dearth and Campen, ed. Final draft 3.9 dated 11 March 1998). Steele is founding President of Open Source Solutions Inc. (OSS Inc.) in Fairfax, Virginia and a former Marine Corps intelligence officer who also served in three of the four directorates of the CIA. See **www.oss.ne.**

3. Martin C Libicki, *What is Information Warfare?* (Washington DC, National Defense University Press, 1995), p. x. Libicki maintains that "principles of intelligence warfare need to be updated to reflect the broader scope of information warfare."

4. n. 2.

5. Intelligence estimate is the appraisal of available intelligence relating to a specific situation or condition with a view to determining the courses of action open to the enemy and the order of their adoption. It is the view of the author, that this is best done by the computer, which is not only highly objective, but also can access all-source input from a large number of interconnected databases.

6. The author disagrees with the approach paper that Humint is invaluable and inescapable in discerning intangibles and feels that the machine will certainly acquire this capability.

7. Information filtering and augmented perception technologies are being developed, which will divorce content from representation and provide sentient translation programmes with semantic capability. A translation agent would interactively convert natural language texts to the semantic lingua franca and interpret them back according to a given user profile. Intelligent software translators would become increasingly popular and would make language as liberated as minds. Flexible translation will help integrate language, currently separated by linguistic and terminological barriers. See Alexander Chislenko "Intelligent Information Filters and Enhanced Reality", **www.lucifer.com/~sasha/homel.**

8. See Earnest May, "Studying and Teaching Intelligence," the keynote address to the Symposium for Teaching Intelligence which was sponsored on 1 and 2 October 1993 by CIA's Center for the Study of Intelligence, *Studies in Intelligence*, 1995 Edition, Vol.38, No 5, **www.odeigov\csi.** It unequivocally suggests that many intelligence officers are trained to be skillful liars.

9. Daniel E Magsig "Information Warfare in the Information Age" at HYPERLINK **mailto:dmagsig@seas.gwu.edn, dmagsig@seas.gwu.edn or magsig@comm.hq. at.mil,** 7 December 1995

10. Martin C Libicki, "Dominant Battlefield Awareness and its

Consequences," *First International Symposium on Command and Control, Research and Technology*, June 1995, p. 550.

11. Yashwant Deva, "Information Infrastructure: Harmonizing Commercial and Social Objectives," a paper presented at the 39th Annual Technical Convention of IETE held at New Delhi on October 1, 1996 and published in the proceedings of the seminar, *Global Information Infrastructure: India in 2005 and Technical Review*, Vol. 13, No 6, November-December 1996, p. 39. See also David S Alberts and Richard E Haynes, "The Realm of Information Dominance: Beyond Information War," n. 10, p.561, wherein similar views are expressed, viz., "Observation produces data, classification of data yields information, the ability to explain information yields knowledge; and given knowledge ability to prescribe indicates attainment of wisdom."

12. Alberts et al, ibid. See also n. 9.

13. See Planning Commission Resolution, No. IT-TF/5/98 of 25th July 1998 given in *Gazette of India Extraordinary* Part 1, No 160 July 25, 1998. It states, "Towards the attainment of the inspiring mission placed by the Prime Minister before the nation to make India an Infotech superpower in the shortest period of time, an effective awareness building campaign shall be launched for the removal of all infrastructural bottlenecks and creation of a nation-wide IT culture."

14. n. 2.

15. Ibid.

16. Jane's Intelweb is a service that monitors news sources the world over and presents open-source intelligence under two heads, "Intelligence Watch Report" and "Terrorism Watch Report."

17. AntiOnline site puts out exploits of hackers.

18. Some of the sites and home pages of interest are: "Canadian Security intelligence Service", **www.csis.scrs.gc.ca**; "Secret Kingdom: UK", **www,cc.umist.ac.uk\sk**; "Milnet Intelligence Agencies," **www.onestep.com\milnet\intell**; "US Intelligence Community", **HYPERLINK http://www.odci.gov\\ic**;. besides **www.odci.gov\ic**;. besides others, e.g., **www.etherzone.com**; **www.primenet.com**; and

www.opengov.uk\co. The US Army runs an intelligence centre of which official bias is denied. Its listings cover the broad areas of open sources, area studies, special interest topics, private organisations and associations, individual contributions and educational technology resources

19. Besides CIA, the US intelligence community consists of 12 intelligence agencies, of which, eight are under the DoD, viz., Defense Intelligence Agency (DIA), National Security Agency (NSA), National Imagery & Mapping Agency (NIMA), National Reconnaissance Office (NRO), Air Force Intelligence, Army Intelligence, Marine Corps Intelligence, and Navy Intelligence; and four are non DoD, departmental agencies, viz., those belonging to the Department of State, Department of Energy, Department of the Treasury and Federal Bureau of Investigation (FBI)

20. During the past 25 years, there has been a sizeable amount of serious research on intelligence. Several new journals and periodicals have come up. Some of the examples, other than those mentioned in the text are: *Intelligence and National Security*, edited by Christopher Andrew and Michael Handel, *International Journal of Intelligence and Counter Intelligence*, edited by F. Reese Brown, and *Defense Intelligence Journal* of the Joint Military Intelligence College. These journals are rich in content and vie with any other research in comparative field.

21. Two recent reports that underscore this point are: first, "Preparing for the 21st Century: An Appraisal of U.S. Intelligence," the *Report of the Commission on the Roles and Capabilities of the United States. Intelligence Community*, popularly known as the Brown Report, of 01 March 1996; and the second, "Intelligence Community in the 21st Century," a Staff Study, *House Permanent Select Committee on Intelligence* of 04 March 1996.

22. n. 2.

23. See Sid Balman Jr, *United Press International* (UPI), 2 June 1998. The Jeremiah panel said that the U.S. intelligence community comprising of the CIA and 12 other executive branch agencies should be streamlined, work in a more co-ordinated way, encourage more creative analysis and develop better hardware to sift through a sea of information daily.

24. Ibid.

25. "Preparing for the 21st Century: An Appraisal of U.S. Intelligence", n. 21.

26. n. 2.

27. Ibid.

28. See Melvin A. Goodman, "The Intelligence Community: Time for a Major Overhaul" America's Intelligence Community is a creation of the Cold War that now includes thirteen secret agencies. It employs over 150,000 persons and spends over $30 billion a year.

29. Ibid.

30. Ibid.

31. "Report of the Study Team on Strategic Electronics for the 9th Five Year Plan 1997-2002, "*Government of India, Department of Electronics*, June 1996.

32. Ibid.

33. Section 104 of the Gazette, n. 13.

34. See "US Intelligence Community," **www.odci.gov\ic.**

35. Escrow is an acronym for allowing authorised entities to invade the privacy of the users. The escrow approach is linked to Cryptopolitics, a term coined by Yashwant Deva, which suggests that code-making, code-breaking, and cryptography standards are tainted with politics, particularly in the US where export control restrictions have a highly smothering influence on vendors' sale of cryptographic systems, equipment or technology to the Third World countries for use in electronic commerce. Also see Yashwant Deva, "National Perspective on Information War," *USI Journal*, January-March 1998, p. 55.

36. Cliper Chip is a state of the art, microcircuit, designed by the NSA. While providing a hardware/software solution to cryptographic protection of individuals and industry, it incorporates key escrow system, for wiretap, to prevent criminals from using it for unlawful

and anti-state activities. See Press Release, issued by the *White House Office of the Press Secretary*, of 16 April 1993.

37. *Washington Post*, 17 July 1996.

38. "US Cryptography Policy", *Fact Sheet*, USIS, 26 July 1996.

39. See "Washington Watch," *IEEE Spectrum*, July 1996 quoting a statement by Kenneth W Dam, Law professor of the University of Chicago and Chairman of the 13 member committee that produced the report at a press conference held on 30 May 1996.

40. Ibid.

41. n. 37.

42. For a study of the concepts, see Yashwant Deva, "Signal Intelligence Concepts, Trends and Issues," *Strategic Analysis*, July 1991.

43. R Garigue, "Information Warfare; Developing a Conceptual Framework," Discussion Paper, Draft Ver 2.0, **www.cse.dnd.ca/~formis/overview/iw.**

44. Ibid.

45. Ibid. Knowbots are programmes designed by their users to travel through network, inspecting and understanding similar kinds of information, regardless of the language or form in which it is expressed. They produce knowledge by linking of information.

46. Ibid.

47. Alexander Chislenko, n. 7.

48. Ibid.

49. Ibid.

50. Ibid.

51. See Peter Grier, "Information Warfare," *Airforce Magazine*, March 1995, p. 35.

52. Alexander Chislenko, n. 7.

53. Ibid. Chislenko further argues that "when interfaces become so smooth and sophisticated, the human-based intelligence will hardly be able to tell where the system core ends and the interface begins."

54. n. 2.

55. Ibid.

56. Ibid.

57. Yashwant Deva, "Infowar: The Challenge of Spin doctoring, " *Combat*, August 1998, pp. 28-29.

58. "China: Ministry of State Security (Guojia Anquan Bu)," *Jane's IWR Daily Update*, Vol. 5, No. 48 of 03/12/98, quoting Fortune Magazine, 30th March edn.

59. Ibid.

60. Epistemology means "the entire organisation, structure, methods and validity of knowledge." In layman's language, it means everything an individual or group holds true or real, no matter whether that which is held as true or real was acquired as knowledge or as a belief.

61. Sherman Kent, *Strategic Intelligence for American World Policy*, (Princeton University Press, 1949), p.180.

62. Jack Davis, "The Challenge of Managing Uncertainty: Paul Wolfowitz on Intelligence Policy-Relations." Paul Wolfowitz is the former Under Secretary of Defense for Policy. In February 1995, President Clinton appointed Wolfowitz to the Commission on the Roles and Capabilities of the US Intelligence Community.

63. *Report of the Commission on the Roles and Capabilities of the US Intelligence Community*, n. 28.

64. n. 58.

65. n. 2

66. Richard Kerr , the former Deputy Director of Central Intelligence and former Director of Intelligence of the CIA. He was speaking at OSS '97, "Global Security & Global Competitiveness: Open Source Solutions", in Washington, D.C. on 5 September 1997.

67. n. 43.

68. John J Arquilla and David Fronfeldt, "Cyber War is Coming", *Comparative Study*, Vol. 12, (1993) pp. 141-165.

69. Ibid.

70. n. 34.

71. Section 104 of the Gazette, n. 13.

72. A parallel could be drawn with the press report that the highest penetration ratio of "cellular" in the country was in Tihar Jail.

73. n. 58.

74. See Nicky Hager, "Exposing the Global Surveillance System", **www.cdp.covertaction.**.

75. Ibid. Two lessons are drawn from this; firstly, that security of all communication systems is important, and secondly, that reliance by the defence services on public communications and market driven security poses serious threats. There is an obvious need for greater role for the Services in protecting the National Information infrastructure. See also Alan D Campen, "Vulnerability of Info Systems Demands Immediate Action: Reliance by Military on Commercial Communications Infrastructure Poses Significant Peril to United States." *National Defense*, November 1995, pp. 26-7.

76. n. 74.

77. See Gazette, n. 13.

78. See Yashwant Deva, "Communication Issues: Op Pawan and Assassination," *Frontline*, 28 February 1992.

79. See Section 101 of the Gazette, n. 13, which states, "An Information Security Agency will be set up at the national level to play the role of Cyber Cop."

80. n. 21.

81. Craig Eisendrath in the meeting held in the Brooklyn Institute on 24 April 1998 on the proposed book on *US Intelligence after the Cold War*. Eisendrath's contribution to the book is a chapter titled, "A US Intelligence System for the Twenty -First Century."

82. "A covert operation is one, where the country's intelligence agencies do something, which conflicts with what its policy and values are purported to be." This explication is attributed to Roger Hilman, who is contributing a chapter titled, "After the Cold War: The Need for Intelligence." in the book, ibid.

83. Robert E White, in ibid. White's contribution to the book is a chapter titled, "A Test Case in Central America and the Caribbean."

84. Martin C. Libicki, *The Mesh and the Net: Speculations on Armed Conflict in a Time of Free Silicon*, (Washington, D.C.: National Defense University Press, 1995.) Analysing the "revolution in information technology." Libicki examines a proposal for creation of "Information Corps". in the light of this dictum.

85. The proposal to issue a "white paper" on ISI activities is a highly laudable step. See *Times of India*, 30 October 1998. See also Yashwant Deva, "Threats to Cyber Security in the Wake of Pokhran II," *Indian Defence Review* (Lancer Publishers, New Delhi), April-June 1998, Vol. 13(2), pp. 47-53.

Restructuring of Intelligence Agencies

Second Session : **The Challenges for Acquisition, Analysis and Dissemination of Intelligence in Early 21st Century**

Second Paper

by

Cdr UK Thapa, DDNI

Introduction

India is at the cusp of the next millennium. Fifty precious years of independence have gone by. India and Pakistan are knocking at the doors of the P5 for admission. Global order, without doubt, is and shall remain in favour of the developed world. Global, regional and the national security environments are ever more chaotic and unpredictable. Non-state actors are further eating into the vitals of the international order. In the current context, war has transformed into an intrusive mechanism of control, conflict, tension and terrorism. The terms "World Peace and Stability", "International Community", "Human Rights", "Free-Trade", "Information", "Environment" and "Jointmanship" are the new Gods of world order. Agricultural, industrial and technological revolutions have now been overtaken by the information revolution, which is the latest ordering and manipulating tool in the hands of the developed world in seeking to alter the established meaning of nation-states, governance and sovereignty. Further, the Revolution in Military Affairs has changed the rules of thinking and executing conflicts. Polity, diplomacy, economy, security, survival and growth

were never before under more pull and pressure as they are now. And lastly, discerning one's foe from friend, ferreting out the invisible enemy and establishing methods to counter myriad surprises and threats is increasingly becoming a nightmare. Moreover, contributions by internal factors are no less alarming. Cross-border terrorism, ethnic strife, militancy, extremism, fundamentalism, sub-nationalism, swindling, attributes of authority without responsibility and accountability, motivated blasts and murders, scams, nexus, ill-treatment of each other, indecisiveness, disturbing mindsets, "somebody else will do it" syndrome and poor returns on most things we do are some of the more glaring internal nightmares. The entry of non-state actors has added further to the burden.

In the last 50 years, India has generally been on a 'stand alone' mode much to the dislike and discomfort of the West. India helped usher in non-alignment, did not support the West in the Suez crisis, pricked the West on apartheid and further with the bible of disarmament. In retaliation, we invited, besides other punitive measures, NPT, CTBT and FMCT, which we have so far withstood with fortitude. We finally have tested and declared ourselves a nuclear weapon state. We have succeeded in building INS Delhi, super-computers, missiles, satellites and launch vehicles. We are now seemingly on the way to save our economy from a global stranglehold. If such were our achievements then there are glaring failures too. Low intensity conflict in Jammu and Kashmir simmers on. Poverty, illiteracy, health, food and drinking water continue to remain our major national issues. Our claim to export fame is only leather, spice and garments. We have been attacked four times. Insurgency in the North-East continues unabated. Smuggling and insurgency in our coastal borders and Far Eastern seaboard are on the rise. Blasts, riots and murders occur at frequent interval, and so on. How does the Indian state manage to fluctuate be-

tween such extremes of performance and non performance, harmony and disharmony, contentment and discontentment, order and chaos and finally decision and indecision, is at once a cause of satisfaction as well as concern.

The answers perhaps lie in the absence of enabling virtues and criteria such as lack of will, co-operation, co-ordination, coherence, information, knowledge, intelligence, databases, computers, communications, decision making and dissemination that are so vital for orderly day-to-day governance, higher direction, shaping responses, making adjustments and evolving policies, strategies, interests and objectives.

National governance, management and administration need policy doctrines to perform coherently, co-operatively and in order to get it right the first time. Humans by nature are dominating and suffer from various other frailties. Resources are never enough. There is, therefore, always room for conflict and control that the strong seek to exploit. Concepts of interests, strategy and objectives are, therefore, a sheer necessity to marry policies and make them succeed. And success requires virtues like continuity and a vast database of wisdom, experience, knowledge, information and intelligence. We have always lacked in information and intelligence. And without these, knowledge and continuity remain a mirage. Nations today, more than any time before, need to be insured against a multitude of risks ranging from Osama bin Laden to Uncle Sam, from undersea to outer space. Intelligence provides that insurance. In the modern context, intelligence can no longer be seen as a lone preserve in the employment of military and defence matters only for the simple reason that wars, tensions, conflicts and control manifest themselves in various avatars that leave no facet of national existence untouched.

The Aim

This paper seeks to dwell upon probable forms of current and future conflicts, how these impinge upon the focus of intelligence effort of the Indian State and what course corrections do we need to meet intelligence-related challenges upto the first quarter of the coming century.

Developed vs. Developing World

The developed world is unlikely to go to war. After centuries of battling one another, they have now covered themselves with one security umbrella or the other. The Organisation for Security and Co-operation in Europe (OSCE), which incidentally also covers Japan and Australia, is one of their major conflict resolving mechanisms. NATO's borders are forever expanding and it will be little wonder if its present border one day were to reach India and China. Monroe Doctrine, US-Japan security pact and ANZUS are some of their other security apparatuses. Such elaborate and multilayered security covers leave the developed world free to drive the world order the way they please. Proliferation of controlling mechanisms is a strong expression of this intent. They control the production and sales of conventional arms. Developing nations can defend themselves only upto a point the developed world thinks the former can afford, and the latter permits. The exclusive nuclear club shall brook no new entrant, regardless of "upstarts" like India and Pakistan knocking at their doors.

For nations seeking to ply their lonely furrow in the international jungle, there are various technology and information denial regimes. One cannot buy supercomputers, cannot shop for cryogenic engines, cannot import nuclear reactors, cannot develop or deploy IRBMs, ICBMs and cruise missiles and cannot even procure bio-technology to grow

more food. Satellite launch business has been made difficult. If one still digs in his heels, juggernauts like World Intellectual Property Organisation (WIPO), International Telecommunications Union (ITU), International Standards Organisation (ISO) and International Electro-Technology Communications (IEC) are let loose to deny facilities, knowledge, slots and frequencies. The dogged ones who still make it past the various hurdles have to finally contend with the Revolution in Military Affairs (RMA) that has dramatically changed the rules of war fighting. If one does not have multi-layered satellites and other sensors, there cannot be an effective ISR (Intelligence, Surveillance and Reconnaissance) synergy and therefore, no superior understanding of situational awareness. Effective Command and Control at national, strategic, central, state, operational and tactical levels also cannot be achieved in the absence of C^4I^2R technologies. Lastly, because one lacks in stealth technology, coherent doctrines and strategic culture, one cannot precisely deliver the "steel on target". Worst still, the "steel" is now sought to be delivered from outer space, which the developing world, with all their disabling aberrations, cannot hope to have for a long time.

The developed world has further compounded the conflict canvas by monopolising and exploiting information, information technology and information-based warfare. The target span of information warfare is as big as one can imagine. Little wonder that it is hailed as the third level of warfare between the conventional and nuclear spectra. Admiral Owen has proudly declared it as America's gift to warfare. Traditionally, we have known the importance of information for a long time. It is only now that the opportunities are newer and many more. Warfare is, therefore, no longer just a question of who invests the "most" in capital, labour and technology in the battlefield. Today it is a matter of who has the best information of the battlefield – be it military, political, economic, social, underwater, on land, in

the air or outer space. What distinguishes the victor is the grasp of the dominant information or the one who retains the information balance. And information balance for the moment is heavily loaded in favour of the developed world that already enjoys political, economic and technological balance.

If the chief executive of a nation cannot direct, monitor and control events in a crisis or conflict; the military cannot shoot; the people, institutions and organisations stand subverted; critical infrastructure is sabotaged; markets cannot function; trading and banking systems are rendered ineffective; and rail, road and air traffic are out of control - then what can one defend and what can one fight for. The saving mantra, therefore, now and for the future is "Joint-manship" in all facets of national performance, not military and defence alone. The conventional, nuclear and information war capabilities that the developed world has, has been supported by their strong economic and technological muscle. If the developing world were to build such a capability, given firstly, that they can overcome the technological apartheid, a strong economic muscle would still be needed. The developed world has seen to it that the developing economies do not flourish beyond a point. Earlier, it was unthinkable that a country could be punished for anything short of war. Today, a nation could invite unwelcome attention like sanctions or such other punishment if one did not follow human rights or "polluted" the environment. The greatest pain is reserved for those whose GDP tends to grow beyond a certain threshold. The ASEAN tigers today have been turned into lambs and the assessment that the 21st Century would belong to the Asia-Pacific no longer stands true. At the forefront of this economic onslaught, besides the multilateral institutions, are the Multinational Corporations who, in the event of confrontation, abandon their ventures altogether rather than bow to governmental dictates.

A respectable man, when troubled by a quarrelsome neighbour repeatedly, finally takes recourse to a court to see that the neighbour sees reason under the law of the land. There is no such respite available to nations, notwithstanding the International Court of Justice and the United Nations Organisation. The League of Nations died an unnatural death because it did not suit some. The UN has now been virtually crippled by the developed world. India recently failed to win a non-permanent seat in the Security Council because of its "spoiler" image; and her quest for a permanent seat may remain a pipedream if we continue with our old ways. In the recent past, the UN's record of solving international problems has been rather abysmal and it is safe to presume that it will be no better in the future too. Be it ASEAN, ARF, NAM, APEC, IOR-ARC to be, or even our very own SAARC, they can only retain their functional independence upto a point. Other multilateral security, economic and informational bodies in any case take their cues directly or indirectly from the developed nations. In our own backyard, the IOR has five power centres and four of these are seemingly with the US. One of these, Pakistan, has been waging a proxy war against us. It will not be out of place to suggest that both China and the US have varying degrees of interests to see that the proxy war continues and India remains in a chaotic and weak state forever.

The developed world is further constantly engaged in creative activities like integration, restructuring, re-organising and diversification at the individual, institutional, national and international levels to cope up with changes and challenges so as to succeed each and every time. German unification, the introduction of Euro and formation of a united European community are modern examples of new ways of doing things. Lastly, the developed world will forever be on the look out for newer avenues of energy and trading opportunities to sustain their higher lifestyles which calls for con-

tinuous adjustment with changes that affect them and further help them in creating entry barriers for the developing world.

In the final analysis, it can be safely assumed that the developed world is not going to descend into fratricidal war in the next quarter century. They are, if anything, expected to re-double their efforts to ensure unity of purpose, economy of effort and achievement of surprise against the developing world. They have no reason to feel threatened from the rambling Third World now or in the distant future, as far as conventional war is concerned. Yes, they do feel threatened in a small way by some non-state actors. But then these threaten the developing world even more. The developed world will, therefore, continue to drive the world order the way they feel and believe.

Developing World Against Itself

Let us now examine what the developing world can do to itself. After the Cold War, the developing world seems to be in a drift mode, wherein their long-suppressed desire to be "somebody" is evident but do not know how to go about it. And those of them who can, have to do so in a very compressed time frame to catch up with the benefits of all the missed revolutions and opportunities. This automatically puts them in conflict against each other. As a result, regional stability now and in future is likely to remain in simmer. Also by 2025, the developing world will contribute up to 95 per cent to the increase in world population. This has an inherent conflict potential for the region and the globe. Experience proves that the members of the developing world have invariably aligned with some stronger "brother" who can help their cause against a perceived regional "bully". As a result, there are any number of conflicts going on in their lands. Kashmir, Kosovo, Chechnya, Tibet, Bosnia, Rwanda,

Somalia and Xinjiang are conflicts on a continuum that seemingly suits the developed world, who in no way are obligated or are ideologically interested in seeing their end. Why should they? It is, therefore, safe to assume that the developing world, India included, is unlikely to be at peace with itself far into the next century.

Even if nations of the developing world are not fighting each other, there are enough problems at home to contend with. The latest of our internal problems that have invited national attention is Dengue, Onions and Dropsy with 'Salt' rubbing the national wound further. Private fly-by-night financial operators have run away with the hard-earned savings of people with impunity. Crime, corruption and scandals are by the dozen. Social and ethnic tensions forever raise their ugly heads. Black marketers, RDX smugglers, scamsters and rapists have been giving a harrowing time to the Indian State. The list of internal ills is perhaps so long that were a National Security Council ever set up, it would instantly plead inability to perform on account of internal aberrations alone. To make matters worse, there is a mushrooming of non-state actors whose pulls and pressures are further sapping the fragile national health. These manifest through television channels, MNCs, internet, NGOs, terrorists, smugglers and drug lords, poachers and hunters.

Choices for India

The various modes of conflict can be expected to exacerbate in degree and intensity in proportion to the weakening of the nation-state. This will finally lead to erosion of governance and mortgaging of independent decision making. Once this happens, the neo-colonial world order would have been firmed up further and there shall be no cause left to defend or fight for. The choices are, therefore, really simple – succumb and give up; or dig in, hold out and pro-act.

For a large nation like India, there is no other choice but to adopt and pursue the pro-active mode. While dealing with stronger nations, if one bows, one shall be forced to bend; if one bends, one shall be made to prostrate; and if one prostrates, one shall be buried. On the other hand, if one says what one means, one shall be heard; if one does what one should be doing, one shall be noticed; and if one braces up to face odds, then he shall be saluted. In a fractured society like ours, solutions naturally cannot be cut and dry. Seeking viable solutions call for a higher degree of imagination, empathy and vision. In doing so, policy makers will have to blend and harmonise various pulls and pressures, group interests, deeper social processes, diverse cultural and attitudinal mindsets, resource base and international dynamics. In the end, political will shall remain the sole deciding factor.

Recognising that policies need to replace ad hocism, it needs to be further understood that policy cannot be devised in the absence of inputs of information and intelligence. Inputs cannot spring from thin air without one or more organisations providing it. The only organisations, which can do so are information gathering and intelligence organisations. It is not the intention of this paper to appraise the functioning of our existing intelligence per se. The focus is directed at achieving intelligence efficiency and effectiveness so very vital to formulating policies, shaping responses and developing negotiating skills in the short, medium and long terms in tune with present and future times.

In the Gulf War, according to Rear Admiral K Raja Menon, the ratio of information-based system to ordnance and ordnance delivery platform was 4:5, in the Falklands it was 1:16, while for the Indian Armed Forces it is believed to be around 1:40. Considering hypothetically, that the Indian Armed Forces are preparing for the war that may never

arise, and that India is a "poor country", and yet further, that the intelligence requirement is intrinsic only to military and defence matters, this ratio for the Indian Armed Forces does not seem entirely out of order. But there is a big "if". The Indian Army has been fighting a proxy war for the past 13 years and there seems no let up in the future. The Indian Navy has been similarly occupied off our southern coast for equally long periods. Of late, the Indian Navy has had to contend with similar issues on the West Coast as well as in the waters of the Andaman and Nicobar islands. These developments by themselves should be enough reason to increase the ratio. Secondly, from the thrust of the paper so far, it should be clear that intelligence is now required by the nation as a whole. Intelligence, therefore, now needs to be recognised as an ingredient of national power, a force multiplier, saver, an insurance policy that guards against surprises, and finally an instrument of growth in the modern context. And this perception is unlikely to change even after 2025 and beyond.

The whole nation now needs to work jointly, though some more and others less, if information balance is to be wrested and retained. We, therefore, need political intelligence to be aware at all times of a given people's and their leaders' cohesion and mental make up; their emotional bonds, their reactive and proactive capabilities and intentions and myriad other characteristics that help them solve problems and shape responses. We further need economic intelligence of target countries' economy, banking, markets, trade and financial systems; their potential and actual resource bases; industrial outputs, technological levels and state of education and health care systems. We also need military intelligence to establish capabilities, vulnerabilities and intentions of target countries to infer what we are up against and what we can exploit. We need a Defence Mapping Agency to digitise cartography and hydrography to produce missile-

friendly maps. We need capabilities to access target countries' computers, communications and networking systems. We need multilayered intelligence, surveillance and reconnaissance systems to monitor areas of interests. Command and control is not, and cannot be, intrinsic only to the military. It is needed by all levels of decision-makers, albeit in varying configurations. We need an effective and efficient National Crypto Organisation. Further, there is need for a full-fledged National Counter-Intelligence Organisation and a Defence Intelligence Agency. We need capabilities to keep a close tab on mushrooming of multilateral organisations whose opinionated pronouncements on the performance of the Indian state is motivated by desires other than friendly. Moody's, Standard's and Poor, Human Rights and such like organisations come readily to mind. We need capabilities to develop negotiating strengths in matters of arms control, trade agreements, environmental and human rights, and bilateral and multilateral issues.

The needs espoused so far shall remain just needs without the power ministries and the Departments of Space, Telecommunications, Atomic Energy and conventional energy, the three Services, DRDO, public and private sectors dreaming, acting and working together. Intelligence cannot be ordered but at the same time the total resource base, intelligence effort, scope and focus can always be harmonised for direction and control of total national power to meet myriad challenges and adjustments. It must be remembered that when a fish begins to rot, it begins from the head. The approach to intelligence synergy has, therefore, to begin at the top.

Course Corrections

A survey of our present intelligence capabilities points to the fact that intelligence infrastructure and institutional

framework as such exists and does not have to be re-invented. But whether they are performing in keeping with national interests, policies, objectives and strategies in the changed context is anybody's guess. Therefore, more than an organisational revamp, we badly need an institutional, mindset and cultural revamp. We need enabling attitudes that can only come about by respect for each others views, shunning of 'us vs. them', turf and self preservation battles, which most of the time take place not because individuals want it but because there is no committed higher direction and control – a glue that brings out the best in Indians when they perform under foreign masters. After all, no man can be grateful at the cost of his integrity and no woman at the cost of her chastity. It further needs to be remembered that higher direction and control imply integration and not sameness. When integrated, we can still retain our individual strengths and creativities and yet contribute effectively and efficiently. Sameness, however, is the enemy of integration.

Apart from attitudinal course corrections, organisational course corrections in the modern context are also necessary - some major and some minor, some implementable now and some later. To begin with, there should be a National Security Council one of whose arms should be an intelligence arm where the buck finally stops. It should be the final recipient of the assessment. It shall be the biggest contributor to filling up vital input gaps in formulation of various policies, responses and negotiating skills. Directly below this intelligence arm of the NSC should be a master assessment, tasking, monitoring and control agency that should be the "mother" of most intelligence agencies. The R&AW, IB, Services Intelligence agencies, DRI, ED, NCB, CBI and various state intelligence apparatus should fall under this "mother". The Defence Mapping Agency and National Crypto Organisation, when created, should initially fall under the NSC and later, when fully evolved, under the "mother".

Similarly, the new National Counter Intelligence and Security Organisation too should fall directly under the National Security Council. Besides the Service intelligence agencies, there should be a Defence Intelligence Organisation directly under the NSC. The DRI, ED, NCB, CBI and State Intelligence apparatus should be under the IB. The intelligence resource base in terms of human, finance, technical means, computers, networks, connectivities and databases could be allocated in keeping with the principles of co-ordination, co-operation, integration, synergy, efficiency and effectiveness in a dynamic external and internal environment. In other words, the resource distribution should be in accordance with "what you are" and not "who you are".

To compartmentalise intelligence acquisition into strict strategic, operational and tactical compartments would be foolish in the modern context. However, higher levels naturally should focus on strategic and operational aspects and the lower ones on operational and tactical aspects of intelligence acquisition, analyses and dissemination. Also, worrying too much whether operational and analyses tasks should be separate or interchangeable would be like missing the wood for the trees. Another folly would be to weigh importance according to whether one is dealing with open source intelligence or secret source intelligence. This distortion is automatically sorted out at the interpretation stage that seeks to build the big picture. Another important issue is of manning. Cross-fertilisation in our context could be the optimal approach till we evolve better options. The last important issue is of finance. In this regard, the simple answer is that we have no choice but to find the money, if we have to survive and grow; the patronising answer is "where is the threat and what are we talking about". And finally the ostrich like answer is "we have managed all this while, why can't we go on prevaricating", which in any case, to most, seems to be the "mother" of all policies and strategies.

The next important issue is about denying intelligence to our adversaries. Till date we were happy if nobody stole intelligence about our Armed Forces - what they are; what, how and when could they do what they have to do. The introduction of information warfare, Revolution in Military Affairs, cultural invasion, self-declared Nuclear Weapon status, and seeming intention to break free from global economic stranglehold dictate that we change our approach to solving counter intelligence tasks more methodically and purposefully. Today, the whole nation is a target - the people, the government, the resources and the economy. The very people, organisations, computers, communication, networks, satellites and precision weapons that we may employ are themselves the most vulnerable. The scope of counter-intelligence has indeed become very vast and it should be the business of a National Security Council to think it fully through for the simple reason that this exercise can no longer be carried out in isolation. It is for this reason that the National Counter Intelligence Agency should fall directly under the NSC.

Conclusion

Advancement in technologies, in particular information technology and Revolution in Military Affairs, have ushered in a new era – an era where things are done more efficiently, effectively, ruthlessly, speedily and decisively. This awareness alone must pinch us to the reality that to survive, grow and retain freedom of action we need to learn newer ways of solving problems. The developed world is on its way to attaining information balance and add to its already existing advantage of political, technological and economic balance. We can no longer remain benumbed and static with defensive thoughts. It can be safely forecast that wars, conflicts, tensions and instruments of control, together with our re-

gional and internal ills, will never allow us to be at peace with ourselves unless we learn the science and art of the proactive approach. Every facet of our national existence is at stake. Under these circumstances, efficient and effective "intelligence" remains the only succour that can provide the required insurance against a whole range of risks. The "length" of the insurance policy and the "range" of risks covered shall, in the final analysis, remain the ultimate saviour.

Restructuring of Intelligence Agencies

Second Session : **The Challenges for Acquisition, Analysis and Dissemination of Intelligence in Early 21st Century**

Third Paper

by

Maj Gen M Bhatia, ADG (SI)

Introduction

It is well nigh impossible to forecast accurately the shape of things to come, yet everyone attempts it. And it is not for nothing that nations attempt to predict the future. The very existence of a nation today depends on its ability to look into the future both for internal and external issues. This it can do only with appropriate information gained through purposeful intelligence.

In the era gone by, intelligence was in a primitive stage of development, starved of appropriate manpower, funds, macro perception and limited to technological constraints of their times. The type of information sought was also restricted to diplomatic manoeuvring, military hardware and war plans. Today, however, the picture has changed drastically with the "shrinking" of the world. Geographical and national boundaries are no more a constraint to watching the activities and intents of nations across the globe. It is with the greatest ease and in fact impunity that nations today have the means to not only watch what goes on but also have the ability to control and change events to suit their interests. This is achieved by pro-active positive intelligence,

which encompasses all facets of a nation's existence and survival. Intelligence today has become an integrated part of a nation's security and is not just restricted to war plans or military hardware of its immediate neighbours. It includes the sum total of developments in all its "global neighbours", be they economic, ethnic, religious, political, technological, military or any other conceivable facet. The happenings in any nation today have an impact, direct or indirect, on the others and no nation worth the mention can afford to sit in medieval monarchical isolation hoping that all will be well by the grace of God.

THE ENVIRONMENT

Global Scene

Intelligence collection has to be responsive to the environment of its time and hence a quick appreciation of the environment of the early 21st Century is mandatory. The current global situation has become more complex by its transition from a bipolar to a unipolar world. The 21st Century will see the emergence of a challenger in China and there are strong indications of a loose bipolar world beginning to take shape. World peace is perhaps the most unlikely event and Low Intensity Conflict (LIC) will be the order of the day. Intervention in these limited wars will be through groups of nations and the increasing use of the "commercial weapon" will be resorted to. Terrorism will tend to get reduced but the lethality of weapons will tend to grow. Hence, the repercussions of LIC promises to be more frightening in the next quarter of a century. Insurgency, boosted with benefits of technology, will tend to be more evident with greater combat potential and effective communications. On the positive side, there will be increased efforts in the field of peace making and counter insurgency operations. Special operations forces to deal with the multifarious threats to nations will emerge. There will be a

paradigm shift from "geo economic" to "geo information" order and information access and denial will emerge as key issues.

Regional Scene

The regional environment will be characterised by increased turbulence fuelled by factors internal and external to it. LIC conflicts in the political, economic, information and military domains will be very much in play. As far as India is concerned the "inverted crescent" will tend to grow more prominent with the active support of developed nations. The nuclearisation of both India and Pakistan will be a stabilisation factor and perhaps may lead to the cold war scenario as witnessed in Europe during the last five decades. The stark reality is that India will continue to be at war encompassing virtually every facet of the nation - military, economic, political, ethnic and cultural. Acceptance of this fundamental truth will make the understanding of the intelligence requirements and the associated challenges easier and more meaningful.

Technological Scene

The rapid advancement of technology has revolutionised the world of communications, computers and information. The Techint environment of 2010 will decidedly be distinctively different from what we see today. The predominant media visualised during the early 21st Century is as under:-

(a) **Communications** : Characterised by personal mobile telephony networks and bandwidth explosion.

(i) *Personal Communications.* The anytime–anywhere voice/data/ image/ video platforms will be in place. All existing mobile communications technologies will merge into the third generation

standardised personal mobile communications - the Future Public Land Mobile Telecom System (FPLMTS). Connectivity will be supported through Hyper Cellular (world-wide), Macro Cellular (countrywide), Micro Cellular (zonal), Pico Cellular (town area) and Cordless systems (buildings), depending heavily on satellite systems and optical fibres for highway requirements.

(ii) *Networks.* Internet explosion is a clear pointer towards events to follow. Information revolution will be the engine to drive establishment of Global Informatics Infrastructures (GII) in the form of Internet, Extranet and Intranets, inter-connected through gateways with security monitoring mechanisms. The worldwide use of the Internet is expected to rise a thousand fold by 2000AD. In the Defence Services the world over, there will be very heavy dependence in tactical battle areas on Intranets to support automated decision support systems, battlefield surveillance, intelligent weapons, fire control systems and other data base related services. Defence forces operating abroad will depend heavily on local civilian network resources for its communications and data handling, thereby increasing their vulnerability further. This opens up an entirely new window of opportunity for Techint.

(iii) *Bandwidth.* In keeping with the explosion in computing powers, an astounding increase in bandwidth is on the anvil, further boosting the capabilities of the networks. With low cost terrabit switching technology introduced and media costs dropping, almost all new networks will be wide band networks, much beyond the requirements of foreseeable future. Any Sigint effort to match this will have to be suitably tailored.

(b) **Communication Security.** Information Technology (IT) has begun to dominate not only the civilian strategic centres, but also the force structure the world over and hence the serious concern for security of networks. In the US, the NSA, CIA and DOD networks have had numerous intrusions, and DOD admits to electronic information security failure. It is far too expensive for any nation to secure everything and everyone at all times, and therefore a measure of acceptable risk has to be determined. The US DOD is content to fix the secured element as 90 per cent, to include mostly Secret and Top Secret information. It seems that even the US is still grappling with the problem, planning the use of multiple layered security, coupled with non-standard hardware, software and customised applications. It is widely acknowledged that there is no single system that can guard against constantly improving methods of intrusions, offering the intelligence community an excellent opportunity for cyber snooping.

(c) **Aerospace Imaging.** This is another area of intense future activity. Space imagery developments are expected to be phenomenal and mind-boggling, and this one single source may even become the major stay of any future Techint. Spy satellites of NATO and the erstwhile Eastern Bloc countries are already in space, and more will certainly follow. China has a well-developed space intelligence programme. Nearer home, sun-synchronous IRS 1C and 1D merely have panchromatic cameras with a grossly inadequate 5.8m resolution, and a 21 day pass capability. It is expected that satellites with Synthetic Aperture Radars (SAR), with much better resolution and all weather capability, will be soon available. By the early 21st Century, sun-synchronous orbits will give way to low earth orbits facilitating quicker passes. Sub-metric resolution and

sub-oceanic look capability is surely expected, and in another 10 to 15 years, we may be entering the era of millimetric resolution and unimaginable look-through capability.

CRITICAL ISSUES

National Intelligence Perception

The biggest and most important challenge for collection of intelligence is perhaps a clear focus on what to collect and why. This is possible only with very clear national intelligence perception, which emerges from a national security policy. The entire framework of the Intelligence Community (IC) depends on this perception. Besides support to military and internal security operations, including law enforcement agencies, the current globalised environment will also necessitate intelligence support for economic, diplomatic and political policy makers. National intelligence perception must therefore clearly lay down the facets that concern the overall security of a nation and the IC is accordingly structured to meet those requirements.

Intelligence Community Management

This issue is perhaps the most vital factor in our context. For a co-ordinated approach to intelligence acquisition, analysis and dissemination there is a need to inject a management approach at the national level for optimum productivity. With the abundance of information to be handled and processed, resource management, systems development, collection management, evaluation and dissemination need to be considered in a corporate style to create a unified and effective IC. Services of common concern should be consolidated at a designated level. Finance and personnel management must be centrally managed. Collection must be managed more pragmatically across all

the disciplines with an all informed and all source process. Research and development has to be an in-house responsibility based on requirements with resource availability to take full advantage of technological opportunities.

The Intelligence Acquisition cycle

Requirements

These are a fall out from the intelligence perception based on national security concerns and will directly affect the organisation and framework of collection, analysis and dissemination. A clear enunciation of the requirements is a challenge for every nation. Getting them right is both vital and fundamental.

Collection

(a) Once the requirements have been clearly spelt out, the next most important step is the allocation of adequate and competent resources required to collect the required intelligence to meet these requirements. The broad groups under which collection is undertaken are:-

(i) Humint.
(ii) Techint.
- Sigint.
- Imint.
- Masint.

(iii) Open source.

(b) While open source requires no discussion, challenges for acquisition of Techint have been discussed separately. Hence only Humint is discussed here.

(c) **Humint.** This activity remains perhaps the most controversial and contentious area of the working of the IC. There is no denying its utility and contribution to intelligence. However, what must be ensured is its proper use and functioning within a well-defined policy laying down specific goals. The execution of tasks needs specific authorisation through officials charged with the responsibility for their functioning. Humint will have to be focussed for major insights into intentions and plans of nations and groups to carry out covert operations. This activity is complex and difficult and cannot be switched on and off at will. It therefore has to be nurtured and grown for ultimate reaping when required. It will also demand the right type of skills and education to ensure that quality sources are developed with an eye on their future usage. This activity is naturally expensive in time and money and to ensure its availability in any area of interest, it must have a global base.

CHALLENGES FOR ACQUISITION OF TECHINT

Internal Intelligence vs External Intelligence

The thin line between target country and the target groups within the country has already begun to diminish and proxy war is here to stay for at least another 20 to 25 years. Widespread use of telecommunications, Internet, e-mail, cell phones, pagers etc., is expected to be made by subversive target groups and agents. With globalisation of telecommunications, this provides them with an extremely viable conduit for contacting their mentors abroad. Even though there is talk of putting in place security checks and controls in such services, their effectiveness is doubtful and debatable. This should be an area of serious concern and a

major challenge to intelligence acquisition agencies. I feel this has a direct bearing on restructuring, as also the Sigint capabilities proposed to be built into the future organisations.

Signal Intelligence (Sigint)

Strategic and tactical Sigint are directly related to the target country's communications infrastructure. Future communication trends that have a direct negative bearing on Sigint have been characterised by two major evolutions viz., optical fibres and encryption and encoding. Fibre optics, being a non-radiating media in optical band and mostly buried underground, would perhaps become the nightmare of the Sigint community. It is further envisioned that almost every transmission, whether on radiating or non-radiating media, will get encrypted. This, coupled with a variety of inherent voice and data encoding schemes prevalent in different communication standards perhaps offer one of the most formidable challenges to the future. From the earlier discussion, it follows that the real challenges in the arena of Sigint would lie in the following:-

(a) **Satellite Intelligence and Satellite Based Intelligence (Satint).** Broadband satellite search receivers capable of taking on geo-synchronous, MEO and LEO Communication Satellites in all the ITUT assigned bands and access/modulation/encoding schemes will be a requirement. Further, technology is now affording the employment of aerial platform based interception stations, which may be in the form of tethered balloons, UAVs, drones or even satellite based stations. All this will certainly call for fresh developments by the R & D sector.

(b) **Value Added Services Intelligence (Vasint).** Search receivers in the cellular trunking and paging services

band, capable of intercepting all accepted international standards (GSM, CDMA, POCSAG, etc) would constitute these. Though these would primarily cater to internal security requirements, if they are mounted on aerial platforms, as discussed earlier, this by itself could be a major source of strategic and commercial intelligence; especially with global PCN networks like IRIDIUM and GLOBALSTAR already in place.

(c) **Cyber Intelligence (Cybint).** Though closely related to information war, there is a necessity to consider this as a separate and distinct passive entity in order to maintain its intelligence focus. Since it involves cracking into the target country's sensitive communication networks, it is considered a communication related activity and hence has to be classified within the Sigint category. This activity calls for tremendous innovation by teams of computer buffs, with 'Cyber Rogue' attitude. Chaotic scene due to proliferation and non-adherence of standards provides tremendous opportunity to Sigint community.

(d) **Aerospace Imaging.** This will perhaps be the most challenging aspect of Techint. All physical areas of strategic and tactical importance of target countries will need to be kept under surveillance. This one single form of intelligence acquisition should be able to provide maximum quantum of information on physical assets, their parameters and deployment, including strategic and tactical weapon systems. This will, once again, be an extremely important factor to be considered for restructuring of intelligence agencies.

Crypt Analysis

Identified by all intelligence agencies as one of the most important and challenging aspects of intelligence acquisition,

this needs special emphasis. With virtually all transmissions (strategic, commercial, personal or any other variety) being encoded, it will be almost impossible to assess the intelligence value of intercepts unless they are decrypted. Further, if we are to globalise our intelligence activities, cryptoanalysis becomes a still more complex activity. It will also be prudent to add that this is an area, which will always remain part of any denial regime, and only indigenous efforts will pay dividends. Hence, it is absolutely essential that we invest very heavily in this vital field, which will turn out to be the key to success of all future Sigint activities. Unfortunately, we are way behind in this field. And this is primarily so not because of lack of understanding but more due to the lack of a cohesive and integrated effort at the national level. As stated earlier, this field is extremely complex and the complexity will further increase with improvements in electronics. What is required, therefore, is a very motivated, professionally second to none and dedicated work force totally engaged in this task in the "operational role". This activity cannot be fruitful if carried out in isolation and as an R&D project, since it has to grow with on the job experience on a continuous basis. It must also be responsible for production of intelligence to give it the sense of urgency. And, of course, it must be accountable to the intelligence-producing agency for its rightful integration in the intelligence acquisition cycle. This perhaps is the single most important factor. Any isolated activity in this field will result in mere academic pursuits for a one time solution at best. We have a vivid example in the performance of one such agency created for crypt analysis in 1963. We have fortunately a well-experienced nucleus in the SI on which a national effort can be built. We have no option but to create this expertise in the immediate time frame if we are contemplating having effective intelligence collection in the first quarter of the 21st Century. It is strongly advocated that crypt analysis be the most focussed challenge to be addressed at the national level.

SUMMARY OF CHALLENGES

Requirement

It must be clearly understood that intelligence is a service. Its entire existence is for providing products or for undertaking operations to support policy makers in the government. Intelligence cannot be for the sake of intelligence but to meet specific requirements of policy makers. Requirements, therefore, are the focal parameters that govern and drive all other intelligence activities and hence assume paramount importance in their enunciation.

Collection

Collection of intelligence by various agencies has been largely unco-ordinated resulting in the emergence of multiple products using common sources of data resulting in wasteful effort with low product reliability. The inability to manage collection optimally across disciplines in both the short term and long term scenario is a major area of concern. This, together with matching the collection resources to the requirements, will assume great significance given the global environment in which this will have to be effected.

To ensure an all-source credible collection system, development and management of collection sources will have to be similarly conforming to requirements. Each source should have the capability and capacity to complement and supplement intelligence gleaned from various disciplines creating a synergy in the collection. The obstacles in achieving synergy will have to be removed. The concept of "stove pipes", as the Americans put it, managing each discipline virtually independently, making decisions suiting only that particular discipline thus tend to compete with one another rather than supplementing. This will have to change to a more balanced, pragmatic and unified management structure

to increase effectiveness and productivity. This aspect assumes much more relevance for Techint in view of their tremendous costs.

Analysis

With the phenomenal increase in raw products by the collection agencies, the task of the analysts will assume greater importance. The analysts of the future will have to be thoroughbred professionals who virtually grow in the IC. Transplanting so called "intelligent" personnel from various non-intelligence organisations will not suffice since such "intelligent" personnel may not be suited for intelligence. Automation and integration with collection agencies will be the order of the day. In view of the large quantum of information to be processed, a layered approach to analysis with responsive interaction with collection agencies will be required, implying thereby that each collection agency be tasked for feeding a preliminary analysis at each level instead of a mere dumping of raw information with analysts.

Concentration Capability

The requirements of intelligence can neither be forecast nor predicted. The system must be flexible enough to cater for changing requirements. It must hence have the capability to respond immediately to new needs. The resources therefore must be embedded in all conceivable areas of concern for use if and when required. In the words of Robert Kimmitt "IC coverage must be an inch deep and a mile wide with the ability to go a mile deep on any given issue".

Crypt Analysis

The biggest challenge to the IC, particularly in the field of Techint, will be crypt analysis. With the improved availability of encryption tools and proliferation of E-commerce, all worthwhile emissions will be encoded. This

field needs immediate attention, as building up an expertise will take a considerable time period. Further, to ensure cryptographic control in the country, the establishment of a cryptographic control and regulatory body will be mandatory. These agencies must work in an integrated fashion. In view of the complexities in this field, effort on a national scale is essential. The existing infrastructure in the Services provides an excellent base on which this expertise could be built.

Dissemination

Intelligence not disseminated to users in the required timeframe tends to lose its relevance and effectiveness. Therefore, means of dissemination must be responsive. Communications and intelligence, therefore, have an intimate relationship that in fact binds the whole intelligence acquisition cycle into an integrated function. Communications required for timely and effective dissemination or movement of intelligence within and out of the intelligence acquisition cycle should be provided by the communications fraternity. The IC should concentrate on development of its competence in the intelligence field and must use the communication fraternity for its communication needs.

Conclusion

Projection and execution of national policies both internally and externally will be increasingly dependant on accurate and timely intelligence due to the interactive nature of happenings in the shrinking world of tomorrow. Intelligence has to serve the requirements of a nation and cannot be an agency for its own self. Technology today demands an integrated, honest and meaningful approach to intelligence definition with matching restructuring of its management and professional execution.

No nation can hope to exist in any dignified form with an indifferent or ineffective IC. Time and tide wait for no

nation and it is therefore imperative that the restructuring process commences immediately. There is an inescapable requirement to organise the restructuring in a such a way that the respective specialisations do not get eclipsed by mundane and parochial considerations of cadre adjustments, intradepartmental or ministerial inducements and the like.

Observations by Discussants and Open Discussion

Second Session

Discussant: Shri K K Mitra, IPS (Retd)

We just had three detailed presentations from three distinguished experts. As I have limited time at my disposal, I shall confine my comments to one or two points in each of these papers and thereafter very briefly refer to my own views regarding the challenges, which the intelligence community will encounter in the 21st Century.

Let me first keep the record straight about three so-called redundant intelligence organisations referred to by Major General Deva. There has been some misinformed reporting in the press recently on the same subject. A committee has been looking into the charter of the SSB in order to reorient the focus of the organisation, which, incidentally, is not an intelligence outfit. As far as the ARC is concerned, there is no question mark or doubt in any quarter about the highly useful role it plays in the field of Sigint and Photoint. The third organisation has a special charter unconnected with intelligence gathering.

Major General Deva assumes that with the revolution in information technology and availability of open source material, there would be no need for Humint or covert action in the future. I am afraid he has missed the mark. It is conceivable that as much as 90 per cent of useful data may be available in the Internet, newspapers or television documentaries, but the missing ten per cent can often be

critical. The published report on the nuclear sites of Pakistan (which he has exhibited in a slide) will not help our Armed Forces in times of war. Commanders in the field and air strike planners will need to know the exact co-ordinates of the installation, the air defence network along with the location and parameters of each radar, missile and gun emplacements around these sites, etc. These vital details will come from Comint, Elint missions and photographs taken from aircraft and satellites. Newspapers and magazines will not help.

As for covert operations, the need for secret well-placed agents has been felt in almost every modern state to supplement foreign policy. Apart from providing information regarding the intentions of political leaders or military commanders in target countries, secret undercover agents can influence the course of events. A think tank or a research institute cannot provide the kind of military or political inputs that modern governments need.

All the three papers have referred to the shift from Humint to Techint in the coming decade. I am inclined to agree with this thesis to a great extent but not entirely. The human collection in the field and the analyst at his desk will continue to play crucial roles. The job of assessing vast quantities of data that will be available from a variety of sources will necessitate specially trained and highly talented manpower. I am glad that Major General Bhatia has referred to this particular problem, albeit briefly. The 'Church Report' in the US noted that shortage of personnel, especially analysts led to major intelligence failures in the past.

Finding qualified talented people will be one big challenge for the leaders of the intelligence community in the next decade. It will not be an easy task. What can a career in intelligence offer? A modest, low profile existence

with no public recognition, social status or prestige! And sinking morale resulting from frequent ill-informed public criticism! Nevertheless, the need of the future is to match the growing sophistication of technical intelligence gathering with the art of assessment of data by skilled and gifted men and women.

Amongst various recommendations made by all the three presenters, Commander Thapa's list is by far the longest and most comprehensive. Yes, we can do with a Defence Mapping Agency, National Crypto Organisation, Defence Intelligence Agency and so on. But the question of effective co-ordination of the multiple agencies has not been touched upon. We are yet to evolve a satisfactory mechanism for resolving inter-agency and interdepartmental rivalries. Will the National Security Council fit the bill as the 'mother of all agencies'? I am not too sure. I doubt if a large NSC will be able to plug all the loopholes in the national security apparatus. Time will tell.

I do agree that there is need for a NSA-like Sigint organisation in our country. The Sigint challenge of the coming century will be to develop better understanding of the communications and radar capabilities of our adversaries. During the Gulf War of 1991, the Americans could not satisfactorily deal with the frequency hopping radios, the high data rate and digital speech encipherment systems used by Iraqi tactical forces. We should not expect too much from crypt-analysts. With advances in microprocessor controlled computers, the code makers are likely to stay ahead of the code breakers in the future. I owe this bit of wisdom to the Chief of NSA who made the remark to me during a meeting some years ago.

The outcome of future wars will depend on the relative edge in electronic and information warfare. South Asia will

be no exception. But the enormous cost to achieve overwhelming superiority in the electronic spectrum is likely to prove a major roadblock in the coming decade. Much has been said about satellite imageries. Here we are talking about a different kind of ball game altogether. During the Gulf War, the Americans manoeuvred five different kinds of satellites with digital image transmission capabilities and overlapping passes over Iraq. Besides, six different types of reconnaissance aircraft were pressed into service. The military satellites we are referring to have resolutions upto several centimetres.

We would need a quantum leap in terms of assets to enter the big league. Would our scarce national resources permit diversion of funds of such magnitude so as to have several dedicated satellites with multiple sensors of very high resolution in the next decade or so? Would we be able to persuade our national leaders and policy makers to revamp our intelligence gathering capabilities by exploiting the cutting edge of technology? That, in my view, will be the main challenge.

Discussant - Shri Bharat Karnad

The three papers presented in the session were informative, with the one by Major General Deva being particularly comprehensive in the treatment of the threat as well as the promise offered by the emerging Information Technologies (IT) in the field of intelligence. But there was no mention in any of the papers of a problem that military organisations may face before long, when war becomes as much a political development as a media event.

Vertically integrated news organisations may be able, even in the present, to field sophisticated IT platforms, which stand to radically change the nature of wars and of

warfighting. Technology has made possible "flying news rooms", i.e., aircraft mounted with gyro-stabilised cameras, and side and forward looking radar able to relay information picked up by these sensors via multiple video, audio and data communications links to satellites and to ground stations. Indeed, a company called Aerobureau, based in Maclean, Virginia, outside of Washington, DC, now offers just such an aircraft for "newsgathering" purposes! Moreover, such "mother ships" may soon have the capability of also deploying and controlling camera-carrying Remotely Piloted Vehicles (RPVs).

Now imagine the havoc such a "flying news room" can cause in a hypothetical conventional India-Pakistan War. At the first hint of trouble, a news megacorp (like CNN or Rupert Murdoch's Fox TV and Star) could hire such aircraft to fly up and down the border (outside of Indian airspace or over international waters) to acquire, process, edit and then disseminate the information about the war fronts so gathered on a near realtime basis, worldwide through TV news channels. Photo and radar imagery of the force dispositions and deployments of the two sides (and, who knows, crucial signals traffic picked up by sensors and quickly decrypted by high speed computers on board the mother aircraft?) all of this secured by virtually uninterceptible RPVs flying low and randomly, in crisscrossing patterns, in the theatre of operations and over the local battlefields -- will be instantly flashed along with knowledgeable commentary to every television set. The areas where the forces are concentrated, the jumping off points, etc., will be as clear to the two sides as to any viewer tuned in. It will bring all warlike activity to a standstill.

How to fight wars in conditions of extreme transparency, will become the ultimate and, perhaps, insurmountable challenge for armies and army commanders. Bringing down

the mother aircraft operating outside of one's airspace may precipitate international incidents and consequent Public Relations disasters.Trying to shoot down intruding RPVs, on the other hand, may exhaust surface-to-air armament stocks. Hard choices and this is in a case involving two Third World adversaries.

But what happens if one of the sides to a subcontinental conflict is an interventionist-minded major power, like the United States? Under the guise of newsgathering, it could, as a psyops action, prompt CNN-type of organisations to unleash "flying news rooms" to discomfit and disorient the local military as a prelude to launching its own devastating strikes against the South Asian (or any other Third World) State.

Unless ways are found electronically and by other means to effectively block access, blind and incapacitate the "flying news rooms" and the fleets of RPVs at their command, warfighting will become difficult and, therefore, war itself against a vastly IT superior enemy or against an inferior power but with a Big State "running IT interference" of this kind for it, extinct. This last may not be such a bad thing to happen, for instance, where India and Pakistan alone are concerned. But were an out-of-control and aggressive US or China to come into the South Asian picture, it will mean bowing to a rogue hegemon, or resorting to the only counter available but outside of the IT-sphere, namely, a long-range megaton thermonuclear deterrent. The Indian Government and the Armed Services must become aware of where technology is leading us and about the limitations it will impose on the conduct of war, and to prepare accordingly.

OPEN DISCUSSION

Comment: Air Marshal Bharat Kumar

The United States envisages that by 2020 their reconnaissance capability will not only be able to detect millimetric items, but also smell, taste, feel and even do a DNA fingerprint of objects on the ground. That is for them. As for India, we have to consider two aspects. First, we are going to have satellites owned by more than one country. Even the data from our own IRS is being sold to various countries. Now even if we have the capability, are we going to knock that off. Iridium is about to be actualised and data is going to flow. How are we going to control that flow of data? Second is camouflage. With all of America's resources, the Iraqi aircraft and jets on the ground fooled them. This is one area neglected by the Indian Armed Forces. It needs looking into because inspite of advances in imagery, this factor will continue to play a major role. Thirdly, as far as Humint is concerned, there can be multispectral imagery etc., but human interpretation is necessary. This is a weakness afflicting both America as well as India. There are not enough trained personnel to interpret the photographs. Even if the data is available, the problem is also one of how fast it gets to the field. The Americans failed in this. We should take precautions and not fail in this aspect.

Comment : Major General Yashwant Deva

I agree that cyber-security is going to be a major challenge in the first quarter of the next century. Undoubtedly, the threat is going to intensify and very little can be done about it. But there are certain measures one should adopt.

Gatekeeping. Some sort of firewall mechanism to ensure isolation of the databases. Very sensitive databases would

have to be 'airtight', in the sense that they will not be accessible to outsiders.

Policing of cyberspace. Satellite threat would obviously be there, but cyber-policing of some sort would be effective. A Chinese policy paper shows that they have roped in everybody involved in cyber-laws. In contrast, in India, the Department of Electronics has been tasked to lay down cyber laws, without even consulting us in the process. It cannot be left to people who have not fought cyber-wars. There is a specific threat to us from Project Echelon - a NSA-sponsored five-country project, in which the intelligence agencies of four 'white' nations of the Commonwealth are participating. They are the eyes and ears for every kind of communications systems that are available. They have the capability to intercept and decode. We have to take cognisance of this. Both the ISI of Pakistan and the intelligence set-up of China lay emphasis on technical intelligence as well as cyber-security and have worked out programmes for these. We need to know what they are doing.

Comment : General V N Sharma

Do we have the will to do anything? Somebody mentioned that we went into Sri Lanka without proper maps and to Male with a tourist map! The latter was a thundering success. But, I don't think that intelligence played any major part in that. Yet, as far back as 1945-46 in West Java, when we needed maps, these were dropped within 48 hours - one of them was in black, developed from a combination of photographs and old maps and printed in the field. They were not complete and yet, we managed to achieve our objective. Nobody thought it unusual, out of the way or extraordinary. Yet, decades later, we are unable to give maps to our own troops in the most critical of places even though we have the Survey of India - one of the best in the world

with enormous resources. Whatever has been spoken of today, have we got the will to put this through?

Comment: Chairman

I agree that there were no maps in Sri Lanka. We managed to get the maps from a shop in London. After the initial problem when we had only tourist maps, we got a fair number of these maps, which were distributed. We also got aerial photographs taken on 15 October 1987, which gave us a total view of at least the Jaffna peninsula. This was later converted into some form of a map and distributed.

In Male, I was involved as the MGGS Southern Command. We had sent people nearly a year earlier and got the photographs of Halule and of all the landing jetties. Those photographs were lying in the MO but nobody bothered to look at them because somebody had filed them away. So, six months in advance, we had all that was required. So the will is there; it is only that it is not exercised properly.

Comment: General V N Sharma

I sometimes wonder how we succeeded so easily in the Maldives. I got the information from the PMO only at 8.15 AM. And we made plans to launch by 12.00 noon that day with the assistance of the Prime Minister and others; not based on a tourist map but on the basis of a naval chart. And the Air Force got hold of the details of the normal landing of civil flights at Male - it was two nautical miles in an island from the target. The entire operation went off very smoothly not only to the extent of sorting out the hostiles who ran away in the ship but to even corner that ship some days later. We took the ship into our custody and saved every single hostage taken by the mercenaries. I sometimes wonder how all this happened so efficiently and effectively. In fact *Time* magazine had its front cover proclaiming 'India

- The Next Super Power'. And the Australians exclaimed that we must be having a tremendous Rapid Action Force! The fact is we still don't have it.

Comment: Chairman

We do have. Only that it is a little invisible. Our parachute brigade and other elements remain on a few hours alert all the time. When people are on 72-hours notice, the notice can always be speeded up. But if you keep them on six-months notice, then it will be extremely difficult to get them even in 72 hours. So, we do have a system.

SUMMING UP

Chairman

We had very comprehensive and knowledgeable talks from the various speakers, which have set the technological parameters, in particular, for future intelligence requirements. An understanding of these is very important if we are to move forward in the right direction. At the same time, there is a requirement to have an equally good understanding of the strategic and regional environment that affect us and the capabilities we need in the next couple of decades, in relation to that environment, and try and fit in our technological aspects to those requirements.

Two aspects need to be highlighted. First, internationally, i.e., globally and outside our region, our requirements are not primarily military. They spring from other factors, which have now come into play in national security matters like economics, trade, manufacturing, technology and so on. Naturally, the intelligence focus as far as those countries are concerned, beyond our immediate neighbourhood, must be largely on such factors. Whatever little military aspects you want to bring into it, they have to be identified and built in.

On the other hand, closer home, you have two different layers - the layer of known adversaries - which are primarily two, on whom you have to focus; the other layer which affects security, not directly, like the West Asian region, the Persian Gulf, Central Asia, parts of South East Asia, Burma and others. In relation to the latter, your interests would not only be the non-military areas but military areas as well. In the future environment, military areas would become increasingly larger because there would be very little difference between peacetime and wartime as far as acquisition of hard intelligence on a real-time basis is concerned. Because we have to look at strategic weapons as intently as we would look at tactical weapons in the battlefield. Therefore, organisational and technological concepts must get related to all these requirements.

Another point that needs to be put in the proper perspective is that of 'Techint'. We talk of the greatness of 'Techint'. At the same time, it is necessary to focus attention on its limitations. In the intelligence community, internationally, there is general agreement on one point - that there is a widening mismatch as far as technology is concerned between the observer and the observed. And this mismatch is widening in favour of the latter. Technology is so developing that a person can hide things better even against Techint in comparison to the ability to develop technologies to pick up what is hidden. The Gulf War partly proved that. We are getting into the age of laser weapons and other sophistications in weaponry. Techint can pickup missile capabilities very easily, but there are no reference points on the basis of which the capabilities of the laser weapons can be assessed unless one breaks into the R & D of the opposing country and gets the details. This applies to phased array radars and so on. These aspects have to be looked at from some other angle, if they cannot be assessed from the Techint angle.

As far as the battlefield technologies are concerned, their success against mobile targets is yet to be proved. The US was very successful against fixed targets in Iraq. But there is general agreement in the US intelligence community that their performance against moving targets, like mobile missiles, was comparatively poor. Satellite imagery is far superior, but the problem is of getting the picture back on to the ground and reaching it to the battlefield in time for it to be of use in supplementing the other information. Moreover, the quality of camouflage is so good that Techint will have to grapple with it. This was one of the failures of the US in the Gulf War.

As for Sigint, it is no longer a simple wireless communication or plain simple network that it used to be. It will involve natural wavelengths, radar, telemetry signals, etc. All these capabilities exist. However, the problem is that it picks up so much that one has to focus on the right thing at the right time to obtain useful data. Secondly, to sift the useful material out of the vast information collected and the ability to collate and analyse it is a major problem. The general opinion is that not more than 10 per cent of the information picked up on Sigint is relevant and useful. Finally, technological manpower is as important as the equipment. The development of the former is going to pose the biggest problem. Even if one keeps pace with the technological movement forward, it will be a worthy accomplishment.

I do not think counter intelligence is being correctly understood. Firstly it is not security. It has two aspects - defensive and offensive. The former is the surveillance of own people to keep an eye on whom the enemy is going to pick up and convert into an agent and neutralise that capability of the enemy. The latter is about breaking into the enemy intelligence network. We have not fully developed that capability yet. To achieve it at the highest level - which

is the best level - and know who are their agents and their techniques and systems. Deception is an important part of counter intelligence. It must be developed. The defensive and offensive aspects of counter intelligence have to receive much greater attention than they have received so far.

WHAT SHOULD BE THE STRUCTURE OF THE INTELLIGENCE APPARATUS IN INDIA AND HOW SHOULD THIS MESH WITH THE OVERALL NATIONAL SECURITY APPARATUS.

THIRD SESSION

Chairman : **Shri N N Vohra, IAS (Retd).**

First Paper : **Lt Gen Ravi K Sawhney, PVSM, AVSM.**

Second Paper : **Cmde Uday Bhaskar, VSM.**

Third Paper : **Rear Admiral Satyindra Singh, AVSM (Retd).**

Restructuring of Intelligence Agencies

Third Session : **What should be the Structure of the Intelligence Apparatus in India and how should this Mesh with the Overall National Security Apparatus**

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)

I welcome you all to the final session of the National Security Seminar of the United Service Institution of India for this year. In this session, the topic for discussion is 'What should be the Structure of the Intelligence Apparatus in India and how should this Mesh with the Overall National Security Apparatus'. We had a very interesting set of discussions yesterday in both sessions and this really is the culmination of a lot of what has been talked of yesterday. We have in this morning's session three papers being presented by very distinguished and experienced professionals. To chair the session, we have with us Mr NN Vohra who doesn't need much of an introduction to this audience. He has had a very distinguished career in the administrative service. He has served in very high echelons of three sections of our hierarchy, as the Defence Secretary, the Home Secretary and till very recently the Principal Secretary in the Prime Minister's Office. I have requested him to, at the conclusion of the session, besides summing up this morning's proceedings, give us a few concluding remarks on the overall topic that has been under discussion yesterday and today based on his vast experience over the years.

Restructuring of Intelligence Agencies

Third Session : **What should be the Structure of the Intelligence Apparatus in India and how should this Mesh with the Overall National Security Apparatus**

Chairman

Shri N N Vohra, IAS (Retd)

As General Nambiar has mentioned, this is the concluding session of this two days seminar and the topic we have for discussion this morning is 'What should be the Structure of the Intelligence Apparatus in India and how should this Mesh with the Overall National Security Apparatus'. We have three presentations. The first is by Lieutenant General Ravi Sawhney, the second by Admiral Satyindra Singh and the third by Commodore Uday Bhaskar. Then we have two discussants, Mr K N Daruwalla and Dr Veena Ravikumar.

I don't think that Lieutenant General Ravi Sawhney requires any introduction to this audience. He has had a distinguished career in command and staff, commanded a corps in the North Eastern sector till recently, before taking over as the Director General of Military Intelligence in Delhi. I now request General Sawhney to make his presentation.

Restructuring of Intelligence Agencies

Third Session : **What should be the Structure of the Intelligence Apparatus in India and how should this Mesh with the Overall National Security Apparatus**

First Paper

by

Lt Gen Ravi K Sawhney, PVSM, AVSM

Introduction

The Indian Intelligence Community is not without its detractors - perhaps with some justification - both for what it is and what it is not. For some, intelligence agencies are dangerous and prone to scandal, illegality, or both. Others argue that they lack competence, citing failures to predict critical events. Most agree that a restructuring is necessary to ensure their relevance, efficiency and accountability. Therefore, it would be appropriate to first examine some basic issues and premises which have a bearing on the intelligence structure suitable for India in the 21st Century.

KEY ISSUES

The Need For Intelligence

Given the global, regional and internal security environment, India needs a strong intelligence capability to support the Defence Services and to assist policy makers to formulate and implement policy in non-military realms that affect national security.

The need for intelligence is in no way diminished by new "open" sources of information. There are still important but hard to learn facts about our targets, including the intentions and capabilities of our adversaries and unconventional weapons development, deployment and proliferation in neighbouring countries. Such information is rarely available on the "information superhighway" or through commercial satellite imagery, and certainly not in enough detail and timeliness to serve policy makers and combatants. Thus there are a number of threats to India's national security and well being that can only be identified, monitored, and measured adequately by using dedicated intelligence assets.

Further, the utility of intelligence collection and assessment transcends the continuing need to learn about secrets. It also involves the importance of sorting out mysteries, of analysing events and trends. Indeed, intelligence can often be of greatest use in increasing a policy maker's understanding, rather than in trying to predict individual events. The cadre of analysts maintained by or available to the intelligence community constitutes an important resource for policy makers trying to manage an enormous stream of information. All over the world, the intelligence community is increasingly the locus within the government where all sorts of information is integrated and related to policy.

The net result of these considerations is that, while there will always be opportunity for introducing operating efficiencies and reducing redundancies, budgetary allocation for intelligence will have to be substantially increased. Modern systems for intelligence collection are expensive, and the demands on the intelligence community from Defence Services and policy makers to collect and assess information for a wide array of tasks are growing. Accurate intelligence significantly improves the effectiveness of diplomatic and

military operations. While good intelligence cannot guarantee good policy, poor intelligence frequently contributes to policy failure. India will have to devote significant resources if it wants an enhanced intelligence capability.

Role of Intelligence

Support to defence planning, military operations and diplomacy should constitute the principal missions of the intelligence community. Countering transborder terrorism, clandestine transfer of unconventional weapons of mass destruction and technologies, illicit activities in our neighbouring countries, such as narcotics trafficking and international organised crime, which threaten our national security interests are also likely to become increasingly important missions in the 21st Century.

Economic Intelligence. The increase in publicly available information may not warrant a significant level of effort to analyse the economies of other countries. Whilst tasking intelligence agencies to produce evidence of unfair trade practices being undertaken by or with the knowledge of other governments to the disadvantage of Indian firms appears to be appropriate, engaging them in "industrial espionage" is a contentious issue which, apart from raising legal and ethical issues, could seriously strain relations with our trading partners and would be difficult, if not impossible, to implement if more than one Indian firm were involved.

Policy Guidance

It is generally perceived that the Indian intelligence community lacks overall guidance on what they are expected to do (and not do); establishing priorities for intelligence collection and analysis to meet the ongoing needs of the government; and assessing periodically the performance of intelligence agencies in meeting these needs.

National Intelligence Committee. The National Security Council, when established, should perform this role. A "National Intelligence Committee" (NIC) is recommended to be created, chaired by Chairman of the National Security Council and include Ministers of State of Defence, Home and Foreign Ministries. This committee should provide policy guidance to the intelligence community.

Management of Techint and Space Reconnaissance

Techint (Sigint, Imint and Masint), in general, and space reconnaissance in particular, are considered to be the most prolific, reliable and accurate means of intelligence collection worldwide. However, they involve massive investment and highly trained specialist manpower. The existing situation wherein R and AW and the Defence Services are independently pursuing their separate programmes has resulted in duplication, wastage of funds and less than optimum performance. These should be classified as 'National Strategic Assets" and their operation and management centralised under a nodal agency.

Techint (including Space Reconnaissance) assets provide the Defence Services access to virtually every area of their concern and use a variety of sensors to collect information responsive to virtually every intelligence need. They constitute an integral part of the force structure, providing critical information with sufficient accuracy and timeliness to support the manoeuvre of military forces and the targeting of their weapons. The key challenge now lies in integrating these systems on a "real-time" basis to forces in the field to a far greater degree than ever before. It would be prudent, therefore, to place these capabilities with the Defence Services so that they relate to and intimately support their missions. Further, no other intelligence agency has the wherewithal in terms of personnel and logistic support required to operate and manage these systems. In the US, the Department of

Defence is the nodal agency responsible for managing these assets to meet the requirements of the entire intelligence community.

Techint has a Counter Intelligence (CI) aspect too relating to ensuring the security of the communications of the government, the Armed Forces, the Atomic Energy and Space Departments, and so on. In India, no agency has been designated as nodal agency for this role. In the UK and the USA, GCHQ and NSA - both Techint agencies under respective Ministries of Defence - are the designated nodal agencies. In India, their counterpart, the Signals Intelligence (SI), is well equipped to perform this role.

Military Intelligence Issues

Notwithstanding the limited Techint as well as Humint capability for external intelligence with the Army, the Services are largely dependent on R and AW to meet their strategic requirements. The increasing frequency with which the Defence Services are called upon in a spectrum of situations ranging from conventional operations, Low Intensity Conflict Operations (LICO), to Internal Security (IS) duties has resulted in an exponential increase in their intelligence needs. I do believe that support for military operations should drive national intelligence policy more than any other single factor. It is also the experience in most countries that defence needs are rarely met by non-dedicated organisations or assets.

Whilst service-specific intelligence needs are adequately met by respective Service Intelligence agencies, the following important functions need to be performed by a dedicated Defence Intelligence Agency:-

(a) Co-ordination of intelligence activities in areas of common interest and intelligence sharing between the Services.

(b) Integrated intelligence support for joint operations.

(c) Meet the strategic external intelligence needs of the Defence Services.

(d) Management of the National Strategic Assets for the entire intelligence community.

Establishment of a Defence Intelligency Agencey (DIA) to perform these functions needs serious consideration. The head of DIA could also be the Intelligence Advisor to the Chairman, COSC as well as the Chairman of a Joint Services Intelligence Board (JSIB). JSIB would comprise all four Intelligence heads to perform the role of co-ordination. The position of Chairman, JSIB vis-a-vis the Service Intelligence heads would be first among equals.

Management of the Intelligence Community

The intelligence community in India was not created, and does not operate, as a single, tightly knit organisation. It is a collection of separate agencies with distinctly different histories, missions and lines of command - the result of half a century of *ad hoc* development. Yet, they are required to operate as a "Community" (implying mutuality as well as independence) in order to best serve the nation's interests.

The performance of Joint Intelligence Committee (JIC), the apex intelligence organisation at the national level, in managing the intelligence community leaves much to be desired. The assignment of Chairman, JIC is not at all sought after by a bureaucrat for it offers only responsibility and no power. Even today, the JIC has no Chairman.

Management of the intelligence community involves :-

(a) Creating a centralised process for establishing requirement and priorities for intelligence collection and analysis.

(b) Co-ordinating the allocation of resources and dissemination of intelligence collected by the National Strategic Assets for all users of intelligence.

(c) Correlation and evaluation of all intelligence.

(d) Objectively evaluating the performance of all intelligence agencies.

(e) Eliminate redundancy, waste and duplication.

(f) Creating a synergy in the functioning of intelligence agencies.

Therefore, a major key to an improved intelligence community is the concept of "corporateness" i.e., the different intelligence agencies and their staff function as part of a more closely integrated enterprise working towards a well defined goal : the delivery of timely intelligence to policy makers and combatants. This higher sense of corporate identity can be achieved without sacrificing services or functions serving specific departmental intelligence needs.

It follows that the head of the intelligence community has to be provided appropriate authority and framework to exercise his community responsibilities without interfering unduly or inappropriately with the authorities and prerogatives of heads of the various intelligence agencies or their departmental heads. At the same time, if the attempt to manage across department and agency lines for the good of the nation is to succeed, some deference will have to be paid to the community head's responsibilities.

In view of the foregoing, the following suggestions may be considered:-

(a) R and AW should be made an independent intelligence agency.

(b) A suitable person should be designated as Director, National Intelligence (DNI) and assigned the following responsibilities:-

(i) Principal Intelligence Advisor to the Government.

(ii) Head of the Intelligence Community.

(c) A National Intelligence Board (NIB) be established to manage the intelligence community. It should be chaired by Director National Intelligence (DNI), with heads of all intelligence agencies as members.

(d) The existing JIC should be restructured to provide staff support to the NIB.

Accountability And Oversight

Intelligence agencies, compared to other institutions of the government, pose unique difficulties when it comes to accountability. They cannot disclose what they are doing without compromising their sources and disclosing their targets. Yet they are institutions within a democracy responsible to the government, the Parliament, and ultimately, the people. Therefore, accountability should be strengthened wherever feasible, without damaging national security.

Internal Mechanism. It is suggested that each intelligence agency should be subject to the jurisdiction of an independent Inspector General appointed by the departmental head. All proposed and ongoing activities should be reviewed to ensure compliance with law and policy. Also, alleged improprieties or programme mismanagement within the intelligence agency should be investigated.

External Mechanism. The intelligence community should also be subject to external oversight by the National Intelligence Committee (NIC).

STRUCTURE OF THE INTELLIGENCE APPARATUS

The proposed changes in the existing intelligence apparatus are summarised as follows :-

(a) Establishment of the NIC (a committee of the NSC) to provide policy guidance and oversight to the intelligence community.

(b) Establishment of DIA.

(c) Designation of DIA as the nodal agency for centralised management of all Techint and Space Reconnaissance assets for the intelligence community.

(d) R and AW should be made an independent intelligence agency.

(e) A suitable person should be designated as Director National Intelligence (DNI) and assigned the following responsibilities:-

(i) Principal Intelligence Advisor to the Government.

(ii) Head of the Intelligence Community.

(f) A National Intelligence Board (NIB) be established to manage the intelligence community. It should be chaired by DNI, with heads of all intelligence agencies as members.

(g) The existing JIC should be restructured to provide staff support to the NIB.

(h) An independent Inspector General should be appointed by departmental heads for internal oversight of intelligence agencies.

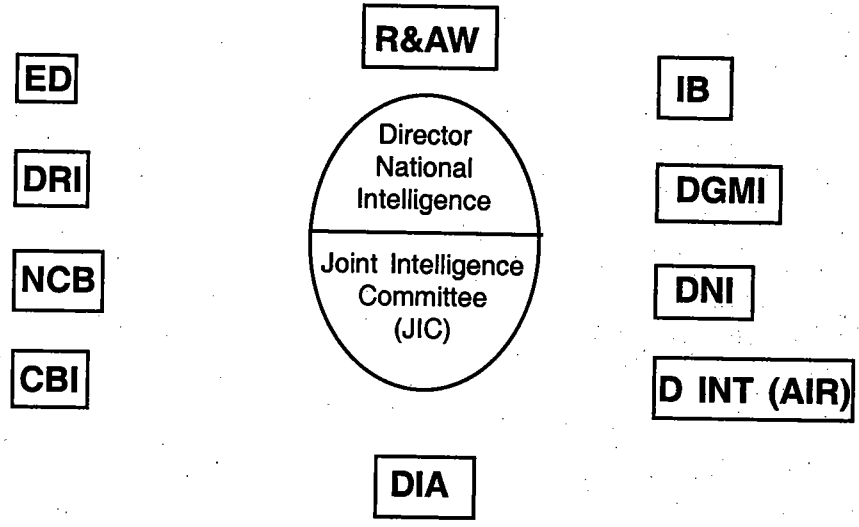
The various components of the intelligence apparatus are diagrammatically shown at Appendix.

Conclusion

The suggested structure of the intelligence apparatus in India is intended to ensure that the intelligence community works together as an integrated enterprise, towards a common goal i.e., the delivery of reliable, accurate and timely intelligence to combatants and policy makers. Policy guidance, accountability and oversight have also to be institutionalised.

Appendix

PROPOSED STRUCTURE OF THE INTELLIGENCE COMMUNITY (NATIONAL INTELLIGENCE BOARD)



Legend

1. R&AW - Research and Analysis Wing.
2. IB - Intelligence Bureau.
3. DGMI - Directorate General of Military Intelligence.
4. DNI - Directorate of Naval Intelligence.
5. D Int (Air) - Directorate of Intelligence (Air)
6. DIA - Defence Intelligence Agency.
7. CBI - Central Bureau of Investigation.
8. NCB - Narcotics Control Board.
9. DRI - Directorate of Revenue Intelligence.
10. ED - Enforcement Directorate.

Restructuring of Intelligence Agencies

Third Session : **What should be the Structure of the Intelligence Apparatus in India and how should this Mesh with the Overall National Security Apparatus**

Second Paper

by

Rear Admiral Satyindra Singh, AVSM (Retd)

In the last few weeks we have seen much in print on the recent reported 'security clearance' of senior serving defence personnel required by the PMO; there were screaming headlines and perceived humiliation. One would like to believe that happily it is all over. But is it ?

It is a messy story of an unchanging 'system' which is not only quaint but with many bizarre dimensions, for some of what we practice today was conceived in the last century when Britain ruled the waves. But oblivious to the demanding need of change, we cling too much to things that should have been discarded decades ago.

As a former Member-Secretary of the apex intelligence organisation at the national level, the Joint Intelligence Committee, for no less than seven years (January 1970 - February 1977) including 'holding the fort' when there was no Chairman for many long months, I was able to get a ringside view of much on this front, not as an operator but as an assessor 'fed' with so-called intelligence from the Home Ministry, Defence Ministry, Ministry of External Affairs,

R and AW, the IB and Defence Headquarters. The assignment of Chairman, JIC is not at all sought after by a bureaucrat for it offers only responsibility and no power. Even today the Committee has no Chairman!

Seeing the spread, it would appear that we received all that we needed not only from substantive papers on many important subjects but also from the Weekly Intelligence Reviews, based on which I had the privilege to 'brief' the Chiefs of Staff, weekly or fortnightly. And it would be an understatement if one were to say there were no continuous goof ups! There was much more and security considerations prevent me from dilating here on some of our grave inadequacies. There were areas even vital to our national security interests which were shelved and statistical assessments made which later proved to be nothing less than 'goof ups'.

But firstly, let me go back a few years and quote an assessment of the calibre of our police and intelligence working made in unambiguous terms by no other person than Prime Minister Indira Gandhi when she addressed a two-day conference of Inspectors-General of Police of the States and the Union Territories, and the heads of various Central police organisations on 19 December 1980. She observed that 'the present image of the police among the public is that of a force with unthinking individuals'. This must change. The police force was an instrument of social change. One of the basic defects was that it did not cultivate the faculties of observation. From her experience she found that the police personnel 'have absolutely no idea of what is happening anywhere'. From the Inspector-General to the ordinary constable, the police must be imbued with a sense of responsibility. The police must be effective but effectiveness did not mean strong-arm methods, she cautioned them. She asked senior officers to consider how the police 'can be made

more humane as well as more competent'. No action could be really effective unless the methods had legitimacy in terms of established social and cultural norms and the legal frame of our country. She added that there was widespread criticism of the police for failure to keep crime under check. She was highly critical of the functioning of the intelligence wing and said (from her personal experience): "I usually know what is happening long before the intelligence report on it comes and I usually know it in greater detail than is supplied to me". She did not seem to favour the present system of confining intelligence work to the police. Everywhere in the world people try to make a vast network "among every section belonging to the country and even among foreigners".

Until 1967 the Intelligence Bureau (IB) catered to all our intelligence requirements – both internal and external. There was no shortage of resources and the legendary BN Mullick exercised complete sovereignty over the intelligence empire for decades. This very hardworking officer indeed became an institution and was the guide and mentor of Jawaharlal Nehru for decades. His assessments were unquestionable (not all proved right) and he was virtually the Intelligence Bureau. After the 1965 Indo-Pak War, a separate agency for our external intelligence requirements – Research and Analysis Wing – was created. It soon developed into a very powerful organisation and resources, again, were no constraints whatsoever. The IB had to do considerable 'power shedding' and it was reduced to playing second fiddle thereafter. We detached ourselves from this era temporarily after a decade or so and with the coming into power of the Janata regime in 1977, Mr Morarji Desai effected major reductions in R and AW and it was no longer the all powerful organisation which it had developed to be. In his autobiography *The Story of My Life*, Vol. III, page 44 Morarjibhai says: "this agency was created in 1967-68 with my consent as Finance Minister. I had not then realised the

real intention of Shrimati Indira Gandhi and agreed with the proposal. I cannot forgive myself for my stupidity in not seeing the possible implications of the seemingly innocent action. This was the instrument of coercion, which Shrimati Gandhi used against all who came under her surveillance, including members of her own Cabinet." R and AW was later restored to its former all pervasive power.

Intelligence gathering can be a difficult and arduous task. It is the result of patience, liaison, logical thought and clear exposition in making the maximum use of all sources and methodically piecing together every scrap of information. That any intelligence agency or organisation anywhere will have its grey areas is indisputable; and that the intelligence experts do not have 'nostradamic' attributes is also an accepted fact. And while it is not required to make the intelligence community a 'whipping boy', there is a very relevant question to ask whether any accountability factors exist anywhere and, if, it does, should it not come into play some time, particularly as we see so many failures and serious inadequacies - both on the national and regional scenes. Other countries like the USA have their Senate Sub Committee as an effective watchdog.

And here I would like to quote an unacceptable occurrence, which took place after the 1971 Indo Pak War. Most of the intelligence agencies which were members of the JIC wished that we should undertake a study of the inadequacies experienced; a sort of debrief, to be undertaken by the JIC. And at the meeting held to discuss this issue, the R and AW representative (later its helmsman) was most upset and threatened to walk out if such an exercise was undertaken. Eventually, the paper was prepared and a little known fact is that there is a JIC Steering Committee at the highest level - a Committee of Secretaries which also included the Chairman of the Chiefs of Staff Committee - which had

to meet at least once a quarter to provide guidelines etc., to the JIC for effecting improvements. This study was undertaken - a highly classified paper and typed by senior officers on my staff - and was commended by the Steering Committee. The then Cabinet Secretary, BD Pande (later Governor of Punjab) chaired the meeting. But sadly, I have to also record here that during my seven-year tenure, I was not able to arrange more than 4 or 5 meetings and R and AW was always the major roadblock.

R and AW deliberately reduced the JIC to an enfeebled role. And here I will quote some observations of a former Director of R and AW in a national daily fifteen years ago. He said : "I agree that the JIC is light-weight and moves tardily. Whether its chairman comes on transfer from the NDMC, the Army or the Police, in its present form it is an unwanted redundancy. The Services, the Foreign Ministry or the Home Ministry have to get on with their job. So they make their own quick assessments of intelligence, which reaches them directly, and go into action. Meanwhile the JIC debates the placement of a comma on the most non-committal phraseology suitable for its assessment. If the customer waits for the JIC's assessment, his house would have burned down. But the solution offered in the form of a high-ranking national intelligence authority without new concepts of its task is merely raising a two-star general to a cosmetic higher rank... ."

A very pertinent question is : why have a JIC if it is not being used as intended? And is it the done thing to play a game of oneupmanship all the time ? It is not only perverse but doesn't help national interests.

On co-ordination of civil and military intelligence agencies, which is a vital necessity, we have had committees in the past making suitable recommendations. BG

Deshmukh, a former Cabinet Secretary and Principal Secretary to the Prime Minister has recorded in a national daily on 26 April 1993 that: "As there is little co-ordination among intelligence agencies, there is often duplication of work and consequent wastage of resources. Efforts to evolve a co-ordination mechanism have not succeeded in the past but its need cannot be over emphasised... ."

And we do need a watchdog for our intelligence agencies if the Steering Committee is not fulfilling a role. And we also have to ensure that no intelligence agency becomes alarmingly powerful and here I quote Shri Jaswant Singh, the present Deputy Chairman of the Planning Commission. This is what he said in a national daily on 30 December 1994: "The Intelligence Bureau has over the years acquired the unsavoury image of being an extension of the political interests of the ruling party, as a specialist in surveillance over the Opposition....."

Until we get our act together, there will be 'goof ups' and these can also be of alarming dimensions. The lucky hit of the powerful CIA not having any intelligence on Pokhran II is commendable, but the US Department of Energy has now developed two devices that can detect nuclear detonation by analysing the atmosphere for traces of radioactive material and much more. So more 'remedial' counter measures and more luck will be required!

Restructuring of Intelligence Agencies

Third Session : **What should be the Structure of the Intelligence Apparatus in India and how should this Mesh with the Overall National Security Apparatus**

Third Paper

by

Commodore C Uday Bhaskar, VSM

Any reference to intelligence is really a throwback to the whole question of the business of information - information as a tool, and how it has been used in whatever manner that states or societies have deemed appropriate in the pursuit of objectives. This is the larger backdrop. Depending upon the time frame or context in which one looks at it, there are various correspondences. Over the centuries and millennia, there has been a certain thought process about intelligence, about information and how to utilise these in the pursuit of a larger objective, which is brought under the umbrella of state security.

In a more recent consensus on this, Sherman Kent wrote about strategic intelligence and world policy in mid-1960s. In his view, "strategic intelligence is the knowledge upon which a nation's foreign relations in war and peace must rest". Much of this has been said before by Sun Tzu, Kautilya and others. What is interesting in this, however, is the use of the word 'strategic' in terms of national security or national policy. It is interesting here to note the parallel between intelligence and strategy or strategic assets that are available.

But since we are contextualising this in national security let us go back a bit and look at national security in the changed context of the post-Cold War era. When we are looking at security for a state in the post-Cold War period, there can be no doubt about the fact that it has become a very inclusive concept. During the Cold War security was by and large an exclusive concept and had a rather defined military connotation and in certain cases a nuclear zenith. Since security was coterminous with the military component, much of the intelligence assets and the exploitation of intelligence were seen along this specific grid. The major transmutation that has taken place after the end of the Cold War is that security is no longer exclusive but an inclusive one with very complex linkages.

Moving to a specific military plane, when we talk about strategic capabilities of states in a purely military context, 'strategic' denotes a certain macro relevance in an MLT (Mass, Length and Time) analysis. By and large, the bottom line is that 'strategic' must have a certain degree of transborder applicability, be it in terms of missiles, nuclear weapons, or surveillance by satellites, etc. One can argue that in as much as a state perceives missiles or nuclear weapons as a strategic capability, then intelligence must also qualify for a similar semantic, and must be used astutely as well. When we talk about states and capabilities, invariably in military parlance, we talk about firepower and surveillance, asymmetries and how they are achieved and exploited for the larger national objectives. It is in this sense that intelligence attains a strategic relevance and we can see in the hierarchy of states how some have been able to use it more astutely than others. My first proposition is that strategic intelligence is a very special entity if it is so perceived and that it can be linked up with other capabilities of the state.

At the same time, any strategic capability of a state - nuclear, missile or otherwise - has to be automatically refereed

or it attains a certain degree of relevance in the pursuit of security for a state only when it is filtered through the prism of strategic culture. Strategic culture refers to the characteristic of the use of force or power in the pursuit of a larger state objective, whether it is internal or external. In short, when we look at the world today, one can identify certain distinctive strategic cultures - American, British, European, Slavic, Sinic, Indic, Persian, etc. Chinese strategic culture, for example, is characterised by a very significant quality - the centrality of force, both in terms of internal governance as well as external dealings. This has been a feature of Chinese history for 5000 years. My proposition is that any strategic capability for a state becomes relevant only when it is filtered through the given strategic cultures. A good example is the question of weapons of mass destruction, where they are seen as automatically providing security or destabilisation. The fact, however, is that missiles are neutral. Take Saudi Arabia, for instance, and its acquisition of Chinese CSS-2 missiles in 1986. The fact that Saudi Arabia was the only country at that time in the Middle East to have such missiles did not in any way enhance its security. We all know what happened in 1991 when Iraq occupied Kuwait and posed a threat to Saudi Arabia. The point is strategic capabilities must be seen through strategic culture.

Here, India offers an interesting example in terms of what kind of a strategic culture we exude. We need to look inwards in terms of what kind of a culture we have at a systemic level. Over the years, the whole concept of national security in India and how it is understood has occasionally been subject to scrutiny. Many states in the developing world have fallen into the kind of situation where state security has often become synonymous with regime security; regime security, in turn, has become synonymous with institutional security or elite security. Therefore, intelligence has been exploited and made to look at a much lower level of relevance

and harnessed for objectives that may not be necessarily coterminous "with state objective or state security." How does one approach intelligence in this complex pattern when we talk about national security with the multiple strands that it has in it. The conceptual challenge is that there is a certain transition. We are living in the computer age and deluged by information. We are also aware that information is preceded by data. From information, we are supposed to move to knowledge. And knowledge will ultimately give wisdom. And wisdom is what impels action by states.

Intelligence has to be located somewhere in the transition between information, knowledge and wisdom and ultimately be reduced or distilled to a prescriptive mode that can then be of relevance to the policy maker. This is really the challenge because, today, we are living at a time when technology has changed the entire context and contour of information gathering, information dissemination and how this information is to be utilised in terms of getting relevant intelligence out of it. If anything, we are in a situation of information overload or overkill.

There is a certain linkage between power and narrative. This again is a very historical tenet. If you look at the relationship between power, narrative and history, this has been the subject of a fair amount of critical theory and discussion in recent years. One of the most interesting treatises on this is by the French Philosopher Foucalt where he talks about power and narrative and how the former allows one to shape the latter, so that it suits a certain policy objective. This is an anomalous statement to make, but the fact is that reality is very subjective. And much of the narrative that we receive in the context of international relations and intelligence security is really a selective shaping of the narrative. In this, we can note a number of instances where certain states, which have exuded this kind of a strategic culture where they have

been willing to take proactive positions and initiatives on their transborder capabilities have shown a certain pattern.

Many of our perceptions of security are mediated or influenced by the kind of information base that we are looking at. It is possible today to shape this information base, whereby certain inferences or analyses are drawn. One good example is the tragic 31 August 1983 Korean Air Line 007 incident. The plane was flying over the territory of the then Soviet Union on its eastern seaboard, and it was brought down because it had strayed into Soviet airspace. So, the bandwidth we are looking at is 31 August 1983, 6, 7 and 8 September when this incident was brought up in the UN Security Council and the whole world was given the insight as to what exactly had happened. The images, the commentary and the entire spin on this was that this particular aircraft was an innocent civilian passenger airline and that the pilot was on course and that because the Soviets were a rabid, evil communist empire, who for no rhyme or reason had brought it down with casualties of over 300 people. This was the dominant narrative. This is the first instance, to my knowledge, in the modern age where images were flashed across the world through television, via satellites. The dominant spin was that this was a transgression by the Soviets, who were basically murderers. Various strictures were subsequently passed. It is only ten years later, after the end of the Cold War that we get to the bottom of this, again because of the liberal transparency that prevails in America. A former CIA man, who was involved in this, has written an interesting monograph where he brings out that the information was leaked in a very selective way. It was a very slick video that was done with images and sound. What they did was take only what they wanted and this is not the first time that it happened during the Cold War.

The need for highlighting this episode is that, for the

first time ever, technology and information were used in a proactive manner through the mass media to try and arrive at a certain policy objective. Ultimately, the truth was that the Soviets had issued many warnings before firing upon the aircraft. There are many other examples where the mass media or information outlets are being used to shape a narrative, to suit a policy objective, which is what the use of strategic intelligence is all about.

For instance, the Bosnia Crisis. There is a standard spin today which the Western media keeps alive about the crisis in Bosnia. They talk about the Serbians, the Muslims, the Croats. The general deduction is that the Serbians are the equivalent of murderers; they are people who are less than European; they are guilty of all the transgressions in the region. There is an attempt to put the Croats and the Muslims in a soft light. Anyone who had studied this conflict rigorously and has gone beyond the fizz of the media, will find that there has been a conscious attempt, led by the Americans and supported by other European allies, to shape this narrative and cast the Serbs in bad light. The Serbs have been unable to package their case and sell it successfully; hence they continue to be identified in negative tones. They are not alone, of course, in the world, in being unable to present their case.

In our subcontinent, for instance, a similar paradigm obtains when we talk about state and security. India is a classic example of a state that is trying to deal with a very wide bandwidth, ranging from macro security (nuclear weapons, missiles, etc.) to micro security (low intensity conflicts, terrorism, fundamentalism, etc.) due to our strategic culture and systemic traits. We have been unable to present whatever we think is the reality for us. Two instances confirm that this is the prevailing pattern. One is the nuclear issue. If one accesses the Internet and key in the words 'Nuclear

India', information equivalent to five miles of paper tumble out. What all these contain is the same standard formulation going back to the mid 1970s with a standard spin on the nuclear narrative of the region. It always starts with three takes, as they call them, and this is the template: India and Pakistan had a bloody partition in 1947, Hindu and Muslim; they have been to war three and a half times; in 1990-91, they were perceived to have acquired nuclear capability; both states were on a precipice in 1990, and but for American intervention there could have been a nuclear holocaust; then comes the story of the day, be it the CTBT or NPT, etc. This has been kept alive to suit a certain policy objective of the West, led by the USA.

As for the 1990 crisis, my personal research has shown that it was not as has been projected. For reasons that can only be ascribed to cultural, systemic traits and institutional pattern, there has been no attempt in India to try and correct this perception. My personal view is that this is a case of intelligence struggle in which we have come second best.

The second issue is of terrorism and low intensity conflict. A pattern has been kept alive in the way Kashmir is projected in the international media. The BBC, for instance, has fudged the issue many times. They had issued images from elsewhere to try and put across a certain story in terms of the whole Kashmir issue and when it was bobbing up and down on the international stage. There are other examples. *The Economist* recently did a detailed coverage on terrorism and Osama bin Laden. They did six pages on post-Cold War terrorism and there was not a single reference to Pakistan as an advocate of a state sponsoring terrorism. This is a reality, that every state uses its organs, its tools, in a certain way. One has to recognise the patterns and have proactive policies. It is essential if India wants to be a medium or a great power. One has to keep in mind that great powers do not whine, they act. These are parts of the systemic traits that we need to look at.

Conclusion

Conceptually when we look at intelligence, what are the new approaches, the new methodologies that may be warranted. Three points merit attention here.

At the very outset, we should recognise the need for harmonisation. Security cannot remain in the realm of the military alone and has to be harmonised in a comprehensive manner and needs to have multiple inputs that are integrated. We had done a study where we established that over-fishing in the Indian Ocean affects the municipal elections in Delhi. These are kinds of linkages, though they may appear disparate. Indian Ocean, fishing, maritime economy, etc., seem very far away from national security considerations. But the manner in which they impinge on internal security with ramifications for external security indicate that there are many complex linkages that need to be addressed.

Second is to recognise the imperatives of technology in the information business. Overload and overkill - how are they to be used and how can one come up with some proactive initiatives that could use intelligence in "a strategic sense."

Three, audit and refereeing of intelligence. There is no institutionalised manner of auditing or refereeing intelligence. There is need for periodic reviews especially now when it is easy for intelligence and the whole apparatus to get skewed.

The challenge for the intelligence community is to understand the various linkages and then come up with prescriptions for the overall framework.

Observations by Discussants and Open Discussion

Third Session

Discussant : Shri K N Daruwalla

I am surprised that during the two days that this seminar has run, not one man has stood up for Intelligence. Even Lt Gen Khajuria, who was DG MI, did not stand up for the kind of work the intelligence community is doing and the goods that it is delivering. From one end of the spectrum to the other, people attacked intelligence forgetting the day-to-day inputs that come both on the internal and external fronts, which keeps things moving in regard to our bilateral relations and policy framing.

No intelligence system can be foolproof and no intelligence can be fully satisfactory because the latter would imply that you know everything that you wish to know about your adversaries or about those who are causing internal disturbances.

In regard to internal security, the Intelligence Bureau, which forms a part of the Ministry of Home Affairs (MHA) plays a big role not only in supplying information about trouble spots and what is brewing there, but also about what measures to take to counter such problems. Thus it has an effective role even in policy framing. The same cannot be said about the R&AW, for while it supplies external intelligence, the policy is mostly framed by others. As a result diplomatic and bilateral considerations often take precedence over security considerations.

While there can be grouses with regard to intelligence gaps - and gaps always will be - agencies have continued to stalk the arms acquisitions by our neighbouring countries and China. The ORBAT of countries we are bothered about are kept under strict scrutiny. Military intelligence forms an important part of the working of the intelligence community and there have been no major *faux pas* for years. Regrettably, the tone during the last two days has been condemnatory. One speaker quoted Mrs Indira Gandhi about the police. The people who are in the IB and the R&AW left the police years back, some decades back, and are fully committed intelligence professionals. Very few go back to the states. Rear Admiral Satyindra Singh even talked about some ASI (Assistant Sub Inspector of Police) coming to an office and not knowing the difference between crores and kroners. But such odd examples can be fished out from any service or department and should not lead to derogatory conclusions.

No one here has questioned the role of the consumers. On numerous occasions, correct intelligence has been given but no use has been made of it. And when the consumer is questioned, he normally resorts to stating that intelligence was lacking! To give an example, in January 1983 or 1984, we came to know that Hashim Qureshi had gone to Birmingham and was staying with Amanullah. Immediately, on January 27, information was given to the effect that he and Amanullah were hatching a conspiracy and a danger of a hostage being taken or an Air India aircraft being hijacked was real. No heed was taken to this cautionary note. The Assistant High Commissioner of India in Birmingham, Shri Mahtre, was kidnapped in early February and killed the next day.

The JIC has a Steering Committee of which the three Chiefs are members. When I was chairing the JIC, we informed all the three Chiefs about the studies we were going

to initiate during the year. Meetings were held in the Cabinet Secretary's Committee Room along with the three Chiefs. The Chiefs tasked us. Not once did anyone complain about the end product. Surely, this was not out of politeness or reticence. The Chiefs of Staff were briefed by representatives from the IB, the R&AW and by the Chairman, JIC once a fortnight. So while intelligence co-ordination may not have been all that perfect, it was certainly streamlined to a considerable extent. But from the nature of the debate during the last two days, it would seem that there is no system at all!

I differ with many of the assertions Lt Gen R K Sawhney has made in his paper. For instance, in paragraph 3 he states that "India needs a strong intelligence capability to support the Defence Services". In this day and age, especially after the Cold War, foreign policy concerns have changed considerably. There is great emphasis on issues like environment, human rights, the end of protectionism, counter proliferation, and international cooperation on all these fronts, including narcotics and international crime. Supporting the Defence Services is certainly important, but it is only a component of the overall intelligence brief and effort. So, one does not agree with General Sawhney when he says "support to defence planning, military planning and diplomacy should constitute the principal missions of the intelligence community". The General has missed certain dimensions.

In regard to the item on economic intelligence, there is a reference to industrial espionage. The Indian intelligence, so far, is not in this game at all and economic intelligence and industrial espionage are separate issues as far as India is concerned.

I would also oppose General Sawhney's recommendation that the military should be entrusted with the "management

of the national strategic assets for the entire intelligence community". Such encroachments are not called for.

Intelligence agencies are not many, unlike the numerous para-military set-ups that we have. It is good to have more than one intelligence agency so that information can be cross checked. The formation of the National Security Council will possibly usher in restructuring at the apex level. Intelligence co-ordination would also be streamlined hopefully. This should improve matters.

Discussant: Dr Veena Ravi Kumar

Keeping in mind the Seminar presentations yesterday and today, my role as Discussant is to raise issues, provoke discussion and stimulate opinions. As a political scientist primarily, I am glad that you have realised the value intelligence has to play as part of the larger national security goal and foreign policy agenda. Firstly, one can safely assume that national security goals have not been adequately formulated; hence intelligence has the likelihood to become obfuscative, repetitive and redundant. Yet, it is highly necessary and needed.

The decision-making process can be seen to be influenced by the world situation and pressures projecting Indian public perceptions of India's interests. This is further influenced by media articulation of interests; think tanks and academic perceptions; and most important parliamentary expression of these interests (read people) in-putting into intelligence agencies and assessment options. Of course, foreign office assessment options and those of defence organisations are definitely taken into consideration and the recommendation made for decisions by the Prime Minister/Foreign Minister/ Cabinet Committee on Political Affairs. The implementation could be reflected in establishing relations with Israel in 1992 or signing the agreement with China on the Line of Actual

Control in 1993 or the Memorandum of Understanding (MOU) with the US in 1989.

Therefore, the role of intelligence is dynamic, vivid and complex in the foreign policy decision-making process. The ground reality is different. In a decision making project we did, it was found that a person's personal rapport with the Prime Minister determined his or her having the 'ear' or 'eye' of the latter. Networking was very personal, not ideological or systemic. So, the "cultural" component spoken of yesterday needs to be looked into some more.

The contemporary political system may throw up a coalition political system again. The intelligence structures and procedures need not be dependent on this in any intrinsic manner; it can be independent of and accountable to the government in power composed of one or many parties.

By its very nature, intelligence projects a status quo-ist position. Only by raising the standard and credibility of intelligence can this view be changed. Technical information and human information both need to be thoroughly disseminated and then assimilated to make them value-added. It is after all the human element which can sift, analyse, accept, reject and use. A case in point is that of a speaker who has emphasised the value of hi-tech equipment in intelligence. I do not deny that such systems are important, but whatever data is obtained has to be intelligently processed. For example, the US has more than its share of hi-tech systems, yet it bungles abysmally.

Keeping in mind intelligence and counter intelligence operations in areas such as the state of Jammu and Kashmir, the Punjab and the North-East, human rights and national security have to be taken in tandem, as controversial as it sounds, in the same framework. It has to be an exercise in human-public relations. Then the Armed Forces will even

manage to recruit more people on its side and intelligence itself made more credible.

Transgressions on individual and personal freedom in this democratic fabric, fragile as it is, has to be more deeply thought about if it were that intelligence should not intrude into personal lives.

The contemporary national security apparatus has to take in a broadened view of linking intelligence - economic and political with diplomacy in the truest sense. For example, even an aspect of hi-tech transfer of the dual use variety has to be evaluated and strategised for. Shopping lists in the US Department of Defence do not contain lists of latest systems; Indian intelligence can input into it.

We have been talking so much on the role of IT in the Intelligence Services. India is a major exporter of software technology. It would be important and viable if civilian software professionals can link up with Services and contribute professionally.

Intelligence gaps have been perceived in the US sanctions. Sensitive nuances of nuclear politics have to be imbibed by the intelligence in the current political scenario. There is no homogenous intelligence and no one brief from the Services. The needs are different and so the strategies have to be different too.

OPEN DISCUSSION

Comment: Brigadier Yashwant Desai

I was very happy to hear from Mr Daruwalla that there are officers on the civil side who are very conscientious and have done a lot of excellent work. But unfortunately, reading the newspapers these days gives the impression that things are going from bad to worse. Let's take the CBI, for example.

There are so many instances where no case seems to be coming to fruition and the evidence presented seems to be deliberately so weak that nobody can be prosecuted. Such an impression is no doubt partly responsible for General Sawhney's suggestion that Sigint, for example, should be taken over by the Army to a large extent. We feel now, as ex-servicemen, that the defence services are probably the only patriotic organisations and hence should do something on their own. At least, they will get some results because they are result-oriented. Things may not be as bad as reported by newspapers, but that is the impression one gets.

Another point I want to make is that all this talk which we have had shows the value of intelligence and the need for more funding. Since funds can only come from the Government, what are we doing to educate the people who govern us or do so in the future about intelligence and other subjects that are of concern to the nation. I think we not only have to take the horse to the water, but also make it drink.

Comment: Chairman

I think we need not get excessively involved with this running debate now. All I would say, if I may exercise my privilege as the Chairperson, is that we are at liberty to express whatever views we wish to about one or the other civil organisations or the quality of their functioning or honesty or efficiency and so on. On many occasions, I dare say, such observations are indeed true. But I would submit another aspect of this matter. Instead of entering into this kind of syndrome of judging and assessing the relative merits of various organisations, we should remember that there has been a general decline in the functional aspects of almost all organisations over the years because of progressive politicisation of their functioning. If we generally accept this fact, then there is no need to spend too much time and energy in assessing the relative contributions of these various

organisations. As organisations, they have succeeded or failed, not largely, but entirely because of the manner in which they had been handled; in terms of who has been appointed to lead the organisation and, even after whatever appointment has been made, has that particular person been allowed to function freely and effectively and so on. But these are issues which go into the larger realm of governance as such. We are here to discuss, more specifically, problems related to intelligence, security and how we need to safeguard our interests.

As for the question about more funding, I think it is hardly necessary to debate the need for that. But I would say, side by side, that we have a plethora of organisations or groups or entities, which are in one or the other way engaged in this overall effort all of which need to be funded within the larger picture of the overall resource constraints. Hence, once we provide a certain level of resources, we have to see what needs to be wound up or integrated or merged, so that ultimately we can sustain that level. And this entire business of intelligence gathering, assessment and analysis has been at no point of time in the past fifty-odd years a cheap affair. It has always been an expensive affair. In earlier years, because of the cost of buying information, while in today's world it is far more complicated, complex and sophisticated, where it is not a question of paying 2 or 3 or 10 lakhs and buying out somebody, subverting somebody. It is much more than that today and far more complicated. So, it is an acceptable and a viable proposition to say that whatever is ultimately decided in terms of structures and system which will operate and deliver, intelligence must get the kind of funding it deserves.

Comment : Professor Satish Kumar

Mr Daruwalla's intervention towards the end put the whole debate about whether we have really been totally

incompetent in the past in a fairly sharp focus. And the examples that he cited of success are commendable; there is no doubt about that. But that raises another question. That is to say, the whole business of intelligence has to be raised to the level of an integral, accepted and respectable part of the governance of the country. Therefore, the successes which have been achieved, if they are not in the knowledge of the intelligentsia, not to say the public, naturally would not result in much respect for the intelligence community. Whereas, in the United States, which is a developed, mature and open country, after a span of time, 10 or 15 or 20 years, former intelligence officers write about various operations and people get to know. For instance, the CIA operation in 1953 in Iran to overthrow the Mossadeq government. British and American operators wrote about it extensively and people got to know that, yes, the CIA has done a few successful things also, just like a number of failures also were reported from time to time. Therefore, this is one thought - upto what point of time the element of secrecy should continue to be an attribute of achievements if ever, and does there come a point of time when the successes, be it Sikkim in 1975 or elsewhere, should be shared with the public and people should rejoice and be proud of the intelligence community and its achievements.

The second question is that the whole debate, which I personally as an academic very much welcome, arises out of a very different context. The context is that irrespective of past achievements, we are faced with new challenges today. The India of today is not the India of 1950 or 1970 or 1980; or, for that matter, even America. Firstly, this is a post-Cold War period, as has been discussed. Secondly, there are new challenges, technological, economic, or of a kind in our neighbourhood where we could not have anticipated something like the Taliban, for example, which came up in such a remarkable manner in the last four years, or of a

situation where out of 1200 or so militants now in the Kashmir area, most are either Afghanis or Pakistanis with the locals only forming a minority. How can you prevent this? Mr Daruwalla mentioned that we have been undertaking operations within Pakistan, trying to create splits in the parties that are opposed to India. What is needed is a very careful, responsible, serious assessment of the new challenges, whether they are technological, economic, political, environmental, or anything else.

What kind of an environment are we surrounded with? Every important country in the world is hostile to India. Why? Because, the existing club would not like another major power to rise on the horizon and thus challenge their monopoly. The United States is not a friend; France is not a friend beyond a point; Britain is not at all a friend. The constrictive regimes are trying to hamper India's economic, political and military growth. These are some of the points to be pondered over in the context of restructuring for ensuring greater co-ordination, sharpness and focus. Acknowledging fully well that what we have done in the past is pretty good in certain ways and failures are common to every country, there is a need to look at the whole situation in the context of the approaching 21st Century which is likely to pose different challenges.

Comment : Chairman

Thank you for both your observations, Professor Satish Kumar. I don't think we need to contest them. As you rightly mentioned yourself, these are your views and we should ponder over them. I entirely endorse your perception. Regarding your observation about there being some time frame or time limit to defining secrecy, I will mention in passing that at the current moment, as you might have seen from the newspapers, the pendulum seems to be swinging in a particular direction, that you pay ten rupees for inspecting

a file. The Cabinet or the Prime Minister has not so far ratified that, but I think that there is a general move in that direction. Unless you have something very genuine to hide and very vital, please don't hide it. And don't charge an excessive price for exposing it. Of course, if you don't deal with this matter very carefully, it could be very hazardous. Somebody will have to be thoughtful about the pros and cons of this so-called transparency.

We are perhaps the only country, advanced in many ways in terms of civilisation and education, with one of the largest defence forces in the world, where we have tremendous hang-ups internally of not publishing our military histories. I was in the Ministry of Defence for a relatively much longer period of time than many of my other colleagues; it was circumstantial that I survived that long. This long stint allowed me to focus on a few things. One of those I did succeed in was to have the histories of our wars completed, finalised and printed. But there were acute differences of opinion between the three Service Headquarters on what paragraphs to include and omit. For example, the Air Headquarters did not like the observations of a particular Brigadier or General at a given operational theatre saying that his forces were let down by the Air Force. So, they want that passage to be cut. If one cuts out what each Service Headquarter doesn't like, there's nothing very much left in the history. Nevertheless, I tried to use indirect language and thus protect the basic sentiments of the Brigadier or General who was in the operational area. We printed these military histories but I was not allowed to make them public. All I could do was get the Prime Minister's approval to number each copy and give them to the schools of military learning - the College of Combat, the Air War College, the Naval War College, the National Defence College, the Staff College, Wellington, and the Chiefs and so on. But the fact remains that we are, as a people, not particularly inclined to

learn from our own experiences, much less allow the newer generation to look into our past and say what we did right and what we did wrong. So, there are many arenas where we have to start thinking of what Professor Satish Kumar referred to as a certain time frame for exposing, of not keeping it a secret. And I think we could learn from that. It would be very valuable.

Comment: Commodore Ranjit Rai

There have been wonderful instances of successes, but I don't think that they should be spoken of. The Navy had something to do with the Government of Seychelles remaining in place. There have been instances of success, but there have been many more failures. I just like to put to Mr Daruwalla and the DGMI this: as an operative, the former said leave it laissez faire, while General Sawhney said centralise. There has to be a system. People wrote essays, copied *Newsweek* and *Herald Tribune*, and classified them as secret. If that is a system, there is no system. Yesterday, somebody objected to placing the Defence Secretary above the Chief of the Army Staff in the hierarchy. But when I was in Singapore, there was present a Service Chief, the Defence Secretary and SA to RM. When the Singaporean government asked me who the senior most was, I contacted New Delhi and was told to introduce the Defence Secretary first but not to use the word seniority. In effect, there is no system. Nobody reports to anybody. Nobody knows what is happening. Our political masters must be told that this country can never get its security right unless there is a very good intelligence system.

I want your comments, between the two of you, DGMI and Mr Daruwalla. What the DGMI said was right. Unless there is reportability and accountability, you can't ring up the Research and Analysis Wing gentleman and say 'what you have sent me is from the *Jane's Fighting Ships*'. It has to go under a note, somewhere up and down.

Answer: Shri K N Daruwalla

I did not touch upon accountability. Of course, there should be accountability. But there is no accountability at least in any civil service in the country, not just intelligence. Of course, I know intelligence is more important because it concerns national security. The other thing about structures - what I said is that go light on structures and let the National Security Council decide its own structure. After that, we can come to these hierarchies. But if you straitjacket people and intelligence within structures, the time lag is very often longer, and possibly even the fixing of responsibility may be delayed.

Answer: Lieutenant General Ravi Sawhney

The first thing I want to make very clear is that whatever I am speaking is my own personal opinion and not that of the Army Headquarters as such. It is wonderful to be given an opportunity to interact with so many intellectuals in a free atmosphere where one can air one's views. I am not at all undermining any organisation. As I mentioned in my paper, each one of us has a history which has made the development of these organisations *ad hoc*. We started of with the colonial hangover. We actually were the outpost of the British colonial empire, where all the things that mattered pertaining to intelligence came to us from London. And when we became independent, that hangover, I think, continued. We did not realise the macro issues at the time when we began our independent existence. I'm not going to comment upon the various organisations because it is a contentious issue. It gives rise to debates that are unending. What I have mentioned is that there should be a sense of 'corporateness'. It's too serious a business to be left to individual personalities. When I mentioned that the Armed Forces should drive the intelligence agencies, it was not out of arrogance. There are practical reasons behind it. Whenever there is a problem of external aggression, it is the Armed Forces who will be called

upon to deal with it. And increasingly these days, the Armed Forces, especially the Army, the instrument of last resort, are being called upon to meet insurgencies and other civil unrest situations inside the country. So what I was trying to say was that the Armed Forces are one instrument which requires to be kept in tune and informed at all times. So whatever system we evolve, I have only mentioned that Armed Forces should continue to be a part and parcel of that. And I feel that too much of ad hocism, tends to lead to chaos.

One important point to be noted is that among all organisations all over the world, there is competitiveness. This is something very good if it leads to improvement. But if it leads to scoring points, then it becomes dysfunctional. So my suggestion is that there should be a certain number of organisations which should be able ultimately to decide among themselves. In our country, we have far too many analysts and not enough instruments. All I am asking for are the instruments, the tentacles. One bit of intelligence can be twisted in four different directions by changing the nuances. Where is the hard intelligence? I am talking about hard intelligence as the Director General of Military Intelligence. So I am humbly suggesting that technical intelligence, which is supposed to be giving you complete hard intelligence, should be shareable with everybody else. So we should be manning it. Let professionals man it. Whatever we do, let us at least have our tentacles right. Whether they are human intelligence or otherwise, analysis can be carried on, debates can carry on. There would be mistakes, as I mentioned earlier. There would be failures. It is not a foolproof system; no intelligence is. But as long as there is an understanding with the policy makers, whoever they are, military or otherwise, as to how a certain area, certain people, certain organisations, certain countries are behaving so that we are well informed, then we can be prepared for it. So without going into the issues about the efficacy of one organisation or the other, I

would say that there should be a system where various organisations should support each other. And at the end of the day, there must be a system where all the inputs come in. There should also be timeliness to the intelligence. I find very fine assessments, which are three months late. So it is of no use to man or beast. Urgency and accountability are needed. Why did it not reach a certain place when it was supposed to. Somebody has to look into that.

Comment: Major General Ashok Mehta

I was rather moved today by Mr Daruwalla's intervention, especially after what Admiral Satyindra Singh had said. We had two completely opposite views. So there is a problem, systemic or otherwise. But I think the more basic issue is this frustration on the part of the military in venting its feeling on national security matters, or intelligence in this case. It stems from the kind of things that happened in the state of Jammu and Kashmir. In 1984-85, Army Intelligence is well known to have said that in Jammu and Kashmir Madarsas are being set up in large numbers, which are likely to create problems. So, I think when the DGMI talks about his problem, or for that matter any DGMI or the Army Commander of the day, he is talking about non-cognisance of the appreciation of military intelligence. But the problem arises from the larger issue of a lack of co-ordination or 'corporateness', the word General Sawhney used, between police, civil and military. I think it boils down to the fact that out of these three organisations or entities, it is the military that is left out of the decision making loop. If, for example, the military were a part of the decision making process, then the DGMI would not be saying that intelligence should be driven by military requirements. In the post-Cold War era, the military entity is only a small component of national security. But the sad fact about our country is that the military is not a part of the decision making process on national security. For example, on the nuclear and missile

issue or the Chemical and Biological Weapons Convention, the military was nowhere either in the consultative or the decision making modes. There is a case of a naval chief who once said at the Chiefs of Staff Committee meeting that he read about naval co-operation with Maldives from the *Times of India*. The problem or the question of 'us and them' is more related to the overall civil-military-police relations because, I think, we are all working for the same objective. Take the case of Afghanistan: it is the greatest boob that we have committed. Mr Daruwalla talked about the MEA and what they have done. Here we have the Jammu and Kashmir on the one hand and Afghanistan on the other, and I'm sure the Army Intelligence had a pretty good plan of what they wanted to do. But that plan never saw the light of day because the military, the MEA and the intelligence agencies are not in that corporate mode. Till the military is brought into the decision making mode, it will not understand that there are things which are more important than the military component today in the post-Cold War era.

Comment: Rear Admiral Satyindra Singh

I want to raise one point, which General Mehta mentioned - about people not being informed or kept informed about things. The case in point was that Admiral Tahiliani, Chairman of the Chiefs of Staff Committee, learnt about Indian troops going into Sri Lanka from the newspapers. He was in Russia at that time. Why did that happen or should it have happened? And this happened between the Chiefs and their political masters trying to do things without getting an apparatus functioning. This situation has not improved and such things will happen again.

Comment: Chairman

I shall write about this incident later; it's too early now. My presumption at that point of time was, when this very,

speedy, decision was taken between the then Chief of Army Staff, the then Prime Minister, the Chief of the Research and Analysis Wing, etc., that there is an internal system of one single service chief having closed-door discussions on operational planning, etc., with his colleagues. Subsequently, it came out that despite the Chairman, Chiefs of Staff Committee and various other methodologies, this really did not take place. I do not want to dilate further on this except to say that whenever we feel a little unhappy, annoyed or aggrieved and talk about the past, we become anecdotal. But we should not, as General Ravi Sawhney said, waste too much time and energy on drawing up a score list of the performance of various organisations. Another point he made was 'corporateness'. If we can, in our work culture, our administrative ethos, generate that, we will work together, despite differences of opinion and personal likes and dislikes, because we would be working for a cause or a given mandate. That unfortunately is not so as yet.

Comment: Colonel Gurmeet Kanwal

There is obviously a fair amount of disagreement between us in the Services and those in civvy street and the intelligence set up. May I recommend something that could bring us together at least in sharing of facts, if not timely assessments. And that is the establishment of a national level intelligence network and data base between all the intelligence agencies and departments for on line, real time sharing of at least the facts about terrorist organisations, secessionist movements, or whatever is known. I would even go a step further and recommend that this kind of data be selectively shared with friendly foreign countries and on a reciprocal basis. And this can be done here and now. No major investments are required to set up such a network considering that computer prices have come down drastically over the last decade.

Comment: Major General Ian Cardozo

The focus of this seminar has been to work out future structures. And there has been a lot of emphasis on a system. I would like to suggest that considering the system first would be like putting the cart before the horse. The system and the structure come last. First, we have to have a national vision; from the vision comes a philosophy; from the philosophy comes procedures; from the procedures come objectives and goals; from goals and objectives we formulate guidelines; and then you make a plan; and once all this is done, then we can work out a system or an organisation to meet that vision, to meet our philosophy. I don't think this has been touched upon by most of our speakers except by Uday Bhaskar.

Comment: Brigadier Chandel

This is to put in perspective what Professor Satish Kumar had talked about. Many a thing that we have talked about here like resources, technology, structures, etc., made me reflect on the American commitments in Vietnam and China. The Americans lacked nothing ever. And they had absolutely fantastic intelligence men like Alan Dulles but fell flat on their faces in Vietnam. They knew nothing practically about the Chinese even though their journalists had known much about it. And they were practically misled on Chiang kai-shek and continued to back him. And all their technology, money and structures led to nothing. Perhaps the nation to contrast the USA with is Israel, where the resources have never been so much. Perhaps, the technology now may be to some extent advanced, but it was not so earlier. There is something else that leads to more effective intelligence and perceptive analysis. So money, technology and structures are, to my mind, secondary matters. Something else needs to be thought about which may be more human, more national, more patriotic and more idealistic, which actually lead to what Ravi Sawhney called corporateness.

Comment: Commodore Uday Bhaskar

I want to make a brief response to Brigadier Chandel's point. I think it is well taken. One can add that today when you do a review or a survey of intelligence, particularly strategic intelligence and national policy, security or otherwise, the biggest boob of them all was the inability of the American community despite all their assets to anticipate the disintegration of the former Soviet Union. If you look at a review of strategic intelligence, this is often identified and that leads to the next point. You talk about Israel and their experience. Now, the current study on the subject suggests that the missing element for America from Pearl Harbour till Osama bin-Laden recently is the feeling that they have not adequately looked at the cultural aspect that I was trying to flag - strategic culture. They say that the missing element was the inability, in a way American impatience as also arrogance, about not wanting to look at anything from the other person's perspective. Vietnam has led to a very detailed critique. As early as 1954, the Vietnamese were asking for a neutral government, but America did not want to listen at that time. And the jump we make is to Israel. Why is Israel so focussed in terms of all its endeavour. That is again because, in terms of strategic culture, Israel is dealing on a daily basis with what it perceives as survivability of the state.

When we talk about strategic culture, to cut a very long story short, it is a popular sort of reduction to refer to 'ant cultures' and 'crab cultures'. The analogy given from anthropology and sociology is that if you put a basket of crabs overnight, by morning nine times out of ten they are all either dead or have declawed each other. They can't get out of the basket. Whereas the 'ant culture' we speak about in strategic terms is that there is a collective goal and if you seal a tin and leave a certain number of ants in it, at some point even if half of them are dead they manage to make an opening and in single file leave the tin and go to the nearest

point of sustenance, collectively. So, these are the systemic traits I was trying to identify, saying that first we also have to look inwards and see as to where we are in terms of collective goals and identities, and there will always be a differential about how states exploit their capabilities.

Comment: Lieutenant General Ravi Sawhney

I've just come back from Vietnam. I saw there how the battles were fought, the tunnels where these chaps existed and the type of punishment they were subjected to. As an infantry soldier, it was a very fine experience for me. I think that they are the finest people, they have a spirit. As Bhaskar said, there is a spirit that is unbreakable. I think the Americans took on people who were greater than what they ever imagined. And all the technicalities somehow can never penetrate the spirit. And I have similar experiences in Israel. They mean business and they go about doing it. They don't waste their time. And surprisingly, I found the Vietnamese wanting when it came to debate. Because they are doers, I suppose. I found them digging tunnels that were unimaginably long and intricate and when they showed me the instruments with which they dug it, I think they are what he called 'ants'. Because they get together and go and do a job. The same with the Israelis too. I think it has something to do with the human spirit, which goes much beyond all the technicalities, technical gadgetry or instruments.

Comment : Dr. Veena Ravi Kumar

Due to paucity of time, one was not able to make some of the points very clearly. A point was raised about how 70 per cent of the terrorists in Jammu and Kashmir are foreign mercenaries. There is a real problem there. In a survey, the people of Kashmir told the Army people "we are with you, you are not with us". So, there's a big policy perception here

if you are talking about 'us and them' and how they perceive us in that situation.

Also, one has to realise what politicisation means and what negative politicisation means. I think one has to know within a democratic framework how military intelligence should interact with the civil authorities. Because, having accepted and assumed a democratic structure that we are all in, we have to take on the structure of the civil authority being accountable to, but having to target what you actually want within a narrower framework and not being disharmonious in that sense.

Valedictory Address

by

Shri N N Vohra, IAS (Retd)

First of all, let me say that I find the 'approach paper' excellently developed. I think there is hardly any aspect of what we have discussed and should be discussing today or tomorrow or the day after, which it does not contain. Whoever wrote it deserves to be congratulated. After the end of this two-day discussion, if an internal analysis is done in the USI to see what areas have been covered and what left out, then we can have another go at this once more.

On the existing structure, you have heard General Sawhney's presentation this morning, and there must have been other presentations yesterday. So, I will not go into it. Considering the few minutes I have before me, let me say in very broad terms that we have the so-called arena of internal security management. And intelligence related to this management is virtually in the hands of the Directorate of Intelligence in the Home Ministry. In similar broad distinction, the responsibility for external intelligence is assigned to the Research and Analysis Wing. Then, we have the three directorates of the defence forces falling upon the pattern of intelligence initially developed by the Army and subsequently by the Navy and the Air Force. The paramilitary organisations, which are much younger in age, as they neared their adulthood, felt that they were missing something in life if they did not have their respective 'G' branches. So, they also started asking for secret funds starting from Rupees 50,000 initially to crores today. And they also generate what they call intelligence in the areas of their operations. Then,

we have this wonderful organisation for very many years, which Admiral Satyindra Singh spoke to us about and served in with great distinction in his days, the Joint Intelligence Committee(JIC). This is the serial kind of order in which these organisations developed. I have for seven years been involved in the JIC as a civilian representative of the Ministry of Defence along with colleagues from the three Services. We used to have very intensive discussions. The JIC was then headed by a very competent police officer and there were no problems of the kind to which references have been made today. I think it is ultimately the way we run organisations, which brings us into disrepute. It is not so much of who belongs to which service and so on. This is not the time to make relative assessments about the various intelligence outfits and adjudicate on their relative strengths and failures.

Let me utilise this opportunity for saying one thing, which bothers me immensely and about which I have written occasionally, though not very competently. When we talk of intelligence, we had for years past been trying to mentally compartmentalise what kind of intelligence is needed by whom. That this is a mistake has been my thesis after having worked in the sixties in the North East and then in the Northwest Himalayas. Within 48 hours of the beginning of the 1962 War, Biju Pattnaik went to Washington and came back with a joint FBI-CIA plan to guard the permanently snow-bound Himalayan borders. There was no Northern Command at that time; the Western Command did not have a foot soldier beyond Narkhanda and they had no reason to. The Hindustan-Tibet Road was non-existent. When things went haywire and this American scheme came through, I was one of its first willing victims - in the sense, they asked for volunteers and I committed myself. Within 24 hours I was mobilised and told to find where to sleep and work. And somebody with a chinagraph pencil drew an elliptical

shape on the map from Shipkila to Siachen, which area I had to cover. Today, you can better appreciate how much territory that is and the geographical problem I was being made responsible for - an area of this size with three passes above 15,000 feet and one above 18,000 feet.

The point I am trying to make is that we have had an evolution. This is still in progress in terms of what the government of the day considered was necessary for intelligence work - be it purely intelligence gathering or analysis or a more forward operation involving counter-intelligence and the launching of operations. At the time I joined the Intelligence Bureau, it was inducting agents into Tibet and doing various other funny things, which nobody will talk about today. There was no Research and Analysis Wing at that time; external intelligence was one of the wings of the Intelligence Bureau. It was only in 1968 that the Research and Analysis Wing became an entity by itself. The point is this partitioning, whether functionally, systemically or intellectually of what belongs to the arena of internal security and external security, and therefore collecting intelligence accordingly, would be a great hazard. In our country, especially after what has happened in the last three decades - insurgencies in the North East, Jammu and Kashmir and elsewhere, the rampant role of the ISI and our own networks happily joining hands, this distinction between internal and external security has become irrelevant, irrational and illogical. So if, after debate, this thesis is found to be generally viable, then you cannot now expect the defence forces of India who are charged under the Constitution to guard the country against any territorial aggression, to be dependent only on intelligence that relates to our external boundaries and very little on what happens in the hinterland, within the country. This may not work any more as it used to in a general manner say thirty years ago. Today, it will not work. So, we have to think about that aspect also when

the Army is faced with certain operational problems in the North East or Jammu and Kashmir or Punjab or elsewhere. Then in his own mind and through operational experience General Sawhney has to see as to what will have repercussions where because it is no longer as simple, and straight forward as it used to be.

About this business of our not being able to work together or letting down each other, etc. - these observations are historically quite valid today. And if ultimately the crunch is to fall on the shoulders of the Indian Military, then they have a valid argument perhaps in saying that they will not rely on these stupid or uncertain or unpredictable civilians. They would like to manage this business themselves. Now this would require a little consideration. But, for the moment, I would go along with the general thesis, which is inherent in what General Ravi Sawhney and others have said that we have a very large task to handle that spreads across the length and breadth of our country. India has 8000 kilometres of coastal boundary, land boundaries that are slightly longer than that, five countries along our land borders and two off the coast. Also, we have at least one neighbour who has been excessively un-friendly towards us since Independence and has set up networks. We have not done anything to counter this, except to beat our breasts. Apart from these difficulties are the many fresh and complex hazards we are faced with all around us, post the new economic policy, post-delicensing, liberalisation and globalisation and the entire revolution in information and communication technology, etc.

There was some hope a few months ago that we will have a National Security Council. And once such a high-powered body is in position, various consequences will flow and then we will find who minds the store as far as intelligence is concerned and who is responsible, whether

civil or military or both or police. Unfortunately, that has been delayed. But I am still hoping that it will take shape and transact itself soon enough. But till the time we have such an omnibus or a macro-structural set up for all matters relating to security, and specifically intelligence, my submission would be that let us not waste a single second in decrying this or that organisation but working along and working together. And I think that much has happened in our country for the good in the past fifty years. Let us not shoot down everything and say that everything has been wrong and we have all been letting down each other. A very many good things have happened in the years past. Of course, we have had failures but that doesn't mean that we have entirely failed. As General Sawhney said, the entire business of intelligence is not infallible. You can have all the structures and charts which Ranjit has been talking about for quite some time as an earlier practitioner of this business as Director, Naval Intelligence. He has his own perceptions and hard feelings and he feels that this ad hocism and this running away with ideas of personality-related systems will not work. I entirely agree with him. Personality-related systems will not work at all in our complex kind of environment. But you also heard Mr Daruwalla say that he would not vote for a very rigid kind of structure where people can't jump levels or go sideways or do collateral things which would mean waste of time and resources. Structures, systems and procedures are very necessary even if you don't use all these words. Whatever we do in whichever arena, we have to be held accountable for the investments that are made and the resources that we spend. If we don't generate the expected results, or we don't generate them in time as General Sawhney pointed out, somebody has not only to lose his job but much more than that.

As for the problems of co-ordination, co-operation and collaboration, I would say that it is also a question of

individual, institutional and national convictions. Now we are the same people that fought for freedom before 1947. We were far more capable of hiding secrets then than after 51 years of independence. What has happened? Something has gone wrong. When we were launching this prolonged struggle for independence, our predecessors who were involved in this struggle knew how to keep secrets and would not yield even while being tortured. Rear Admiral Satyindra Singh made a very kind reference to my father under whom he had studied. My father was one of the most trusted officers of the British Government up to a point of time. He did the first surveys of Burma, Sri Lanka and Afghanistan. The First World War had thrown up many lessons and the British War Office had asked the Surveyor General, the Viceroy of India, that they must have and try to aspire to have one-inch maps which were unknown at that time. My father was one of the persons who did the most difficult tasks of mapping when he was working in the Office of the Surveyor General. And he used to be absent from our home in Lahore for long periods of time, carrying out surveys in the remote areas of Afghanistan or the boundaries of Burma or China. My mother's brother, Sukhdev, was in the terrorist movement at that time; he was part of the outfit, which included Bhagat Singh and Rajguru. And the family had kept this a very tight secret. These boys used to use my parent's house as a safe haven. They would come around midnight, eat some food, collect some more and disappear in the early hours of the morning. This went on for a long time. When this was disclosed, it didn't take the British Government 24 hours to sack my father, to issue a black border notification saying that nobody related to my father's or mother's family would even be employed as a peon in the government. So that was the kind of spirit, which our people had.

What I am saying is that we did seem to be capable of holding confidences and secrets and working together or

conspiring, which all are very necessary in this business of intelligence and security. Today, we are talking only of transparency from morning till night. I sometimes get a little worried when I read in every magazine and journal and newspaper about transparency and it being linked with honesty, accountability and efficiency. Of course, there should be transparency. But if one were to expose everything, life would be terribly difficult. So we have to think about that.

Coming back to the mainstream, let me say that we will hopefully have more clarity about the National Security Council in the coming weeks and months. Once that happens then we shall have a picture of who will do what and will be answerable to whom. It was mentioned in passing during the morning that the JIC is a thankless task because you had no authority there, only responsibility, and hence the absence of takers for this job. But I would say that, that is perhaps not the only reason, at least of late. The Government has consciously not filled the post not because there are no takers or there is no one good enough for the job. When I happened to be temporarily associated with the Government in 1997, the reasoning, which I personally supported, was that since we were on the verge of setting up a National Security Council, that should be done first and then a person found who can work with that set up. Thus, one thing got connected to another - the first thing did not happen, hence the second thing is still lagging behind. The JIC has been without a boss since June 1997.

The approach paper makes a very relevant reference to Humint, Techint, Sigint, Elint and such interesting terminologies. I would say that all these things will have to go in parallel. Wherever they are being handled at the moment, let them go on for the present. The task of integration and consolidation should be done when the time comes for mature thinking and collaboration and corporateness. Let us

not rush and waste time and energy decrying that this or that is bad. By and large, we have not done too badly for ourselves or for the country. One reason why the JIC, which in my perception and in my time was not an altogether defunct or a meaningless organisation, is seen as a failure is that there was a point of time when it was not allowed to develop for understandable reasons. Initially, it was hoped that the JIC would prepare threat perception analysis. Once accepted and approved by the highest authority - the Cabinet or the Prime Minister, etc., they were to form the basis on which budget allocations for the Services would be made. But both single Service Chiefs and the Chiefs of Staff Committee found this unacceptable. They thought that this was all bogus - some odd characters sitting in some vague building called Sardar Patel Bhavan or something and preparing threat perceptions on the basis of which each Service will get a submarine or an aircraft or a long-range gun, and so on. They felt that they cannot allow themselves to be pushed by such paper analysis. So, I found in the course of my own rather extended stay in South Bloc that year to year we were consciously and intellectually denigrating the worth and value of these assessments till a stage came where nobody was reading them. Much valuable work had gone into these analyses because the JIC was tasked at the beginning of the year by Chairman, Chiefs of Staff Committee, the Cabinet Secretary, the Defence Secretary, the Home Secretary and the Foreign Secretary to come out with studies on say the Pakistani Air Force or the Chinese Navy and so on and were even assigned priorities. But then we stopped using the product. The moment we stopped using the product, naturally the JIC declined. There are very good people in the JIC today, which is headless.

This has been rather a rambling and not the kind of concluding remarks that General Nambiar ever wanted me to say or listen to. All I would submit is that in sum, things

are not all that bad. If one day we are allowed to say where we started from, then I can describe the circumstances under which we were working say forty years ago and where we are today. And I can prove by documented fact where we went wrong and how elsewhere we did not go wrong. The way things are now I can't go into all that. But hopefully, in the near future, there will be more exposure and writing and an intelligence set up which satisfies most of you who spend a lifetime in this business of security and defending the country;will produce the kind of outcomes which everybody looks for; will actually use that outcome, not just from the military alert point of view of how many days you give us to go to war with China or Pakistan.

That is only part of the story. I think the complexity of survival in the globalised environment of attacks on our economic, science and technological, educational frontiers, etc., will need a lot of attention. Let us not have that single-point focus of military and boundary and war. I think the threats that we face today are variegated, multiple and it is not merely restricted to military threat and military insecurity. With these few words, I thank General Nambiar for inviting me, as also the rest of the audience for participating in the seminar. It appears that many issues are still hanging. My perception is that some issues will always hang because one cannot close every topic and discussion to a conclusion in a mathematical sense. We can get on with the job, we have had very fine ideas since yesterday morning. Thank you once again.

Vote of Thanks

by

Maj Gen Y K Gera (Retd)

I take this opportunity on behalf of the United Service Institution of India to thank all of you who participated in the seminar both yesterday and today. I would like to thank the Chairpersons who conducted the various sessions, the participants who presented the various papers, the discussants who focussed on important issues and grey areas and most importantly the audience who by their presence and participation have contributed substantially towards the conduct of this seminar. I especially like to thank those participants who came forward and accepted our request to present papers at a very short notice. It goes to their credit that they acceded to our request so very willingly. What I find encouraging is the participation by such a large number of serving officers from the three Services from the middle and junior levels. It is you who have to shape the destiny of this country in the years to come. Therefore, the more you are prepared for it by listening to various views that have been expressed here, the better it is both for you and the country. I am sure that it will stand you all in good stead in handling situations as they develop. I would like to thank on behalf of all of you Shri Vohra for what he calls not the valedictory address but the summing up of the session today as well as what happened during the whole day yesterday. We are really grateful to you Sir, for having educated us so very well in the process. Finally, I would like to thank the Director, USI, for his guidance and encouragement for the conduct of this prestigious annual event for the USI. My

gratitude is also due for the USI staff, particularly Colonel VK Singh, Commander Dhupia and others who have worked so untiringly and have made this event a success. Thank you all very much indeed.

National Security Paper

Organisation and Concept of Employment of Strategic Rocket Forces

by

Lt Gen Pran Pahwa, PVSM (Retd)

ORGANISATION AND EMPLOYMENT OF STRATEGIC ROCKET FORCES

Introduction

When the subject was initially offered to me in January 1998, I had accepted it with the idea of carrying out an academic study on a subject in which I had always been interested but had not been able to devote much time to. Little did I realise then that in a few months' time the issue would become so topically significant.

The nuclear issue has been one of the major subjects of discussion since nuclear tests were conducted in May 1998. The public has been overwhelmed by the deluge of articles, opinions, interviews, TV programmes and even quickie books on the subject. Initially the debate was mostly on the question of whether India should have gone nuclear or not, overlooking the fact that this was now a reality. Later on, the emphasis shifted to more substantive and practical issues like the most suitable nuclear doctrine for the country and what should be the nature and size of our nuclear arsenal. The majority of the views in the newspapers and TV were not very helpful in writing this paper, being either based on inadequate knowledge or vague in their arguments. There were however some notable exceptions, which proved very useful.

There is no dearth of written material on the subject of nuclear weapons and nuclear warfare, both by Indian and

foreign writers. Books by western authors have generally been written with the Cold War conditions as the background. Those conditions do not exist in the Indian context. Their conclusions are therefore not entirely relevant to us. They were, however, helpful in providing an insight into the basis of their thinking. Articles and books by Indian writers were more helpful as they were more in consonance with the reality of the Indian strategic environment. I have made extensive use of these writings and would like to gratefully acknowledge their help.

Lastly, the nuclear issue has become so topically significant these days that a number of organisations and individuals in the country are carrying out independent studies on it. This is a good sign, as it shows the country's growing interest in security matters. At the same time it made the task of writing this paper more daunting because inevitably what is written here will be compared with the views of others. There is an advantage in this too; the country's policy makers will now have inputs from a number of sources which should make it easier for them to arrive at a pragmatic nuclear policy. Hopefully this paper will also contribute towards that end.

BACKGROUND

There should really have been no need to write a paper on the subject of the organisation and concept of employment of India's strategic rocket forces at the present stage of India's nuclear programme. All this should have been considered, discussed and decided (in absolute secrecy if necessary) well before India conducted its nuclear tests in May 1998. It is, however, typical of the ad hoc functioning of our government that action is taken first and the details considered later.

The country's decision to go nuclear was not a sudden

one. The first test was conducted almost a quarter of a century ago. Since then at least three Prime Ministers are known to have actively considered conducting additional nuclear tests. There was ample time to decide on the related practical aspects of the shape and size and concept of employment of the nuclear forces prior to the recent tests. Apparently not much thought was given to it.

It takes a considerable amount of time to raise a military force and make it fit for operations. Personnel have to be designated, units have to be raised and their command and control, and system of logistics and maintenance has to be decided upon. Thereafter they have to be equipped with the appropriate weapon systems and trained in handling and maintaining them. All this may take a few years.

Having conducted the nuclear tests, we now have to start this process right from the conceptual stage. This situation would not have arisen had our governments been used to long term planning in defence and security matters. The conceptual aspects would have been decided upon well before and by now we would have had at least a skeleton nuclear force on the ground along with the basic framework of a Command, Control, Communications, Computers, Information, and Intelligence System (C^4I^2) in place. Incidentally, Pakistan claims that it has had a basic C^4I^2 system in place since the early 1990s. It would have been surprising if it hadn't, considering that its nuclear programme was in the hands of the Army and it had acquired the bomb by the late 1980s.

The country has lost out on other counts as well. Had the successive governments given at least the three Service Chiefs an inkling of their future thinking, they would have specifically planned to acquire dual-use equipment which can be used for both conventional and nuclear warfare. They would also have planned their acquisition of conventional equipment

keeping in mind that the country intended to go nuclear at some future date. This would have resulted in considerable savings. As it happened the long delay after the first nuclear test in 1974 had made the Armed Forces almost discount the possibility of their ever acquiring nuclear weapons.

All this is now in the past. We must plan for the future. Conceptualisation of the employment of nuclear weapons is the first and the most urgent step required to organise a nuclear force. This is now being belatedly done. An equally important issue is to get the country to generally better understand the subject of nuclear weapons and national security. This will be the more difficult of the two because throughout history Indians have never been known for their strategic sense - India has never produced a Sun Tzu. Being ignorant about security matters does not carry any stigma in this country and even well educated and otherwise well informed people unabashedly admit to their lack of knowledge and disinterest in security matters.

The same is true about most of our political leaders also. This is a serious shortcoming. The nuclear bomb is basically a political weapon. The nuclear button will be in the hands of the political leadership. The politicians must understand it well so that they can exploit it fully. Unfortunately, as Roy E Jones has said, "Men whose thoughts and experience are most important are the men who have the least available time to devote to meditation on strategic problems."[1]

Simultaneously, the people must be made security conscious. There must be a more open debate on the implications of nuclear asymmetry, the types of nuclear targets, means of delivery, the survivability problem and so on. Indians in general appear to have a guilt complex, a sort of diffidence about becoming militarily strong. This feeling is carefully nurtured by the Indian official mind-set, which, conscious of the need to protect its own power, displays what has been

described as a "historic antipathy to military power of the state.[2]" There is no need to be apologetic about our size and strength. Being militarily powerful is not a sin but a necessity in the world of realpolitik. It is the misuse of power that is wrong. We are a big country, with a billion people, and we must be strong - both economically and militarily - to assume our role in regional and world affairs.

The subject of this paper is 'The Organisation And Concept of Employment of Strategic Rocket Forces'. Rocket forces form part of the total strategic forces and cannot be discussed in isolation. The paper therefore, perforce, deals with the strategic forces as a whole.

To arrive at the organisation and concepts of employment, it is first necessary to decide on the country's nuclear policy and nuclear strategy. These in turn have to be related to India's overall national security policy. Once these pre-requisites are decided upon, the concept of employment and organisational requirements will automatically suggest themselves.

Consequently, a large portion of this paper is devoted to discussing and evolving a nuclear strategy for the country. The challenge really is for India to evolve a nuclear strategy, which is affordable and at the same time enables it to deal with the other nuclear powers confidently.

Finally, this paper is about strategic forces only. Tactical nuclear weapons have not been discussed and they are not recommended either.

THE GEOSTRATEGIC ENVIRONMENT

The organisation and concept of employment of Indian security forces is inextricably linked to the nation's overall se-

curity policy. This, in turn, depends on the global geostrategic environment and the perceived threat to Indian national interests. It is therefore necessary to discuss the geostrategic environment first to the extent that it pertains to India's national security requirements.

The USA and China are the two countries which affect India's security calculations at the global level. The others, including Pakistan are more relevant at the regional level. After the demise of the Soviet Union, the USA is the world's only remaining super power. Militarily, economically and technologically it is far ahead of all the other countries. At the international level today, it is not possible for any country to take any major security-related decision without taking into account the reactions of the USA. It has military bases all over the world and its naval fleets, equipped with the latest weaponry, dominate all the oceans. It is the key player on the global security scene.

The USA has been playing an active role in various conflicts like Iraq, Bosnia, Kosovo and Israel, where its own interests or those of its close allies are involved. In most cases it manages to legitimise its actions by obtaining authorisation from the UN or NATO. It, however, does not hesitate to act unilaterally or in violation of international laws if its interests so demand .The recent missile attacks on Afghanistan and Sudan are examples. There is no country or international organisation today to which it considers itself accountable.

The five nuclear weapons powers (P5), led by the USA, have tried to retain exclusive control of nuclear weapons through the Non-Proliferation Treaty (NPT), Comprehensive Test Ban Treaty (CTBT), and now Fissile Material Cut-off Treaty (FMCT). As Air Cmde Jasjit Singh has pointed out, they have succeeded in shifting the focus from disarmament to non-proliferation[3]. Their plans were upset when India (followed

by Pakistan) initially refused to sign these treaties and later in May 1998 staked their claims to the exclusive nuclear club by conducting nuclear tests. India has evoked the ire of these countries particularly the USA, China and the UK. However, except for Japan, which is itself under the US nuclear umbrella, the reactions of the ASEAN and other countries of the Far East were not as violent as expected. Perhaps they see nuclear India as a counterweight to China in the long run. India is now being subjected to various types of pressures to abstain from weaponisation and accede to the non-proliferation treaties by the P5 and some other countries.

China is seen as an emerging super power by the world, though it is still a long way from it. At present it is furiously involved in building up its economy, modernising its armed forces and improving its technological base. India has a border dispute with China and has had a war with it in 1962. China's increasing military might in the 70s and 80s was counterbalanced by India's friendship with the Soviet Union. The break-up of the Soviet Union followed by Sino-Russian rapprochement (and now Sino–US engagement) is a cause for worry not only for India but also for Japan and the rest of East and South-East Asia.

Apart from China, India's chief security concern in its neighbourhood is Pakistan .The main cause of the present tension between the two is said to be Kashmir, but the reasons are much deeper as will be discussed subsequently. After its defeat in 1971, Pakistan strove to acquire nuclear capability to restore what it calls the strategic balance with India. It managed to achieve this by the late 1980s.

India thus has two nuclear states on its borders. There has also been a proliferation of ballistic missiles in Asia. It has been assessed that in addition to India, eleven other countries

in Asia have ballistic missiles[4]. These include, among others, China, North Korea, Pakistan, Iran, Israel and Saudi Arabia. The source of supply of missiles or missile technology in a number of cases can be ultimately traced back to China or North Korea.

Afghanistan is another security concern in the region. It has been ravaged by a war for almost two decades. Notwithstanding that the Taliban now controls almost 90 per cent of the country, peace is unlikely for some time to come yet. Afghanistan has become strategically important because, though the natural gateway for export of oil and gas from Central Asia to the Indian Ocean is through Bandar Abbas in Iran, Afghanistan could provide an alternate route via Pakistan's Karachi port. This has led to active interference in the Afghan war by Pakistan with tacit support from the USA. A Taliban ruled fundamentalist Afghanistan, with a vast terrorist and drug trafficking network, closely allied to Pakistan (which is one of the only three countries, to recognise the Taliban government), could pose a serious security threat to India in Kashmir.

Further West, the Arab-Israeli dispute continues to fester and peace is unlikely to return to that area soon inspite of the recent efforts of the USA. India's security interests in West Asia lie in the fact that India imports the bulk of its oil from there and that a large number of Indians are working in the Gulf States. Any turbulence in that area is bound to affect India's economy adversely. India also has close religious and cultural links with the West Asian countries.

Of the greatest importance to India's security is the Indian Ocean. India is strategically situated to dominate the Indian Ocean. Its sea trade routes, which account for the bulk of its foreign trade, run through it and its island territories of Andaman, Nicobar and Lakshadweep group of islands also

lie in it. The Indian Ocean is equally important for world trade as all the sea-lanes from West Asia to the Pacific Rim run through it. For countries like Japan, the security of this route is critical because it carries 80 per cent of its oil imports. There are also a number of oil and gas pipelines, both existing and planned, which further enhance the strategic importance of the Indian Ocean. Central Asian oil and gas exports are also likely to be exported through the Indian Ocean ports as and when a safe route is available.

As of now, India has the largest Navy among the countries on the Indian Ocean Rim though it is much smaller than what the length of the country's coastline and its strategic location dictates. The USA had realised as far back as 1950 that in the coming years oil would be an essential ingredient to sustain the economies of the developed countries in the West. It therefore started making efforts to gain control of the Persian Gulf and dominate the Indian Ocean. It has established a military base at Diego Garcia, which is barely a 1,000 km from Kanyakumari and is currently in the process of establishing a larger base in Qatar. The USA is thus well poised to influence events in the Indian Ocean region to its own advantage and that of its allies.

India is the biggest country in South Asia and the second largest in Asia. It is too big to look to others for its security. Rather, it must be in a position to provide security to the other smaller countries in the area. This is a role thrust upon it by geography. If it fails to fulfil it then the smaller nations will be forced to look elsewhere. This will draw other major powers into the region, which will be detrimental to India's security interests.

THE THREAT

A country's security policy is based on both the external threat as well as internal threats emanating from economic

reasons, ethnic conflicts, lack of social justice, religious and sectarian strife and many other factors. In this paper, however, only the external threat is being considered.

China

There has been of late an attempt to play down the threat from China. This may serve a larger diplomatic purpose for the present but the fact that China is India's main long-term threat cannot be wished away. The issue is more than territorial claims; China is purposefully trying to become a great power within a specified time frame. The first step in this direction is a pre-eminent status in Asia, including South Asia. India could be an obstacle in this quest and this could be one reason why it has taken such a hard line on India's nuclear tests. By aligning itself with the USA on the non-proliferation issue it may be hoping to remain the sole nuclear power in the region and remove the only possible challenge to its primacy in Asia.

Apart from the issue of its nuclearisation, India is not at present a priority with China[5]. Its chief preoccupation remains Taiwan. At the moment, it is concentrating on developing its economy and building up its armed forces so that it can achieve its plan of becoming a great power. It is not keen to rake up any contentious border issues at this stage. This should not however lull us into complacency. Some of the points, which cannot be overlooked in assessing the threat from China, are: -

(a) Inspite of some large cuts in manpower and some more planned for, China still has the largest standing Army in the world and is making serious efforts to modernise it.

(b) By propping up Pakistan against India and transferring nuclear technology to it, China has deliberately set

it up as a countervailing power and locked India within the subcontinent in a nuclear stand-off with it[6].

(c) China never gives up areas that it claims on its borders. It bides its time. When in March 1988 Vietnam was preparing to withdraw from Cambodia and was eager to avoid any conflict, China seized six islands in the Spratlys that it had earlier claimed. This was a repetition of 1974 when the South Vietnamese government was about to collapse. China had then seized the Western Islands of Paracels[7].

(d) China has no compunctions about forming a coalition or a temporary alliance with one enemy in order to defeat the main threat; but it never loses sight of its basic antagonism towards the temporary ally[8].

(e) China's No First Use commitment is conditional and would not apply to India. Moreover, China has a history of going back on its earlier stands whenever it suited it. At one time it had stated that the spread of nuclear weapons to as many countries as possible was desirable and would promote disarmament. It had also opposed treaties like NPT, Partial Test Ban Treaty (PTBT), and CTBT saying they were ploys by superpowers to retain their nuclear monopoly.[9] Now it has resiled from this stand, condemned the Indian nuclear tests and demanded that India sign the NPT and CTBT.

(f) Estimates about China's nuclear arsenal vary and are tentative. The general consensus is that it has between 400 to 450 nuclear warheads including about 125 ballistic missiles (ICBMs, SLBMs, IRBMs, and MRBMs)[10] as of January 1997. It is reported to have added two new ICBMs recently.

(g) As for deployment of nuclear weapons, Tibet has 3 to 5 nuclear sites and a large number of bomber bases.

Along with about 4 to 6 ICBM and MIRVs, there are about 90 medium and short range ballistic missiles deployed in Tibet[11]. China has a No First Use agreement with Russia and has already signed a de- targeting agreement with USA. Japan and South Korea are protected by the US nuclear umbrella. The medium and short-range missiles could only be targeted at India[12].

(h) In its military plans, China is giving the highest priority to becoming a militarily effective nuclear power.

(j) China has developed a nuclear capability beyond a minimum deterrent, acquired a second strike capability and changed its nuclear strategy from the earlier 'counter value' to 'counter force.'

Therefore, we must remain wary of China and the military capability that it is developing. Its record shows that one cannot go by what it says today. Its disputes with India remain unresolved. Beijing will most likely bring them up when it suits it most.

Pakistan

India has several disputes with Pakistan, and these have led to three wars in the past 50 years. Even now there is Pakistan-sponsored proxy war going on in Kashmir. Pakistan's foreign policy from the very beginning has been based on two factors – hostility towards India, and Kashmir as an objective. There are some who believe that once the Kashmir question is solved, all of India's problems with Pakistan will be solved and the two countries thereafter will exist in peace. This reasoning is in accordance with Pakistan's claim that Kashmir is the core issue and once that is settled all the other disputes would also be resolved. It is a simplistic view.

The basic cause of tension between India and Pakistan is

much more complex. Several hypotheses have been advanced to explain Pakistan's almost obsessive hostility towards India .The one that is the most plausible and shows a keen insight into the country's collective psyche is that it is Pakistan's search for an identity which is at the root of all its problems with India. It finds it difficult to fix upon any rationale for its existence as a separate country. There is no geographical, linguistic, religious or cultural basis that can give it a sense of nationhood. It has been vainly trying to seek its identity sometimes in West Asia, and at other times, in religion. The most effective way out it has found so far, is to unite the country against India. It is thereby forced to deny its Indian roots and everything Indian and assume a negative identity – that whatever it may be it is not India. What this implies is that even if the Kashmir problem is solved, Pakistan will have to find or create another intractable dispute with India to sustain itself as a nation. There is, therefore, going to be no early easing of Indo-Pak relations.

Pakistan acquired nuclear weapons to achieve strategic parity with India because of the latter's superiority in conventional forces. But the aim was more than merely restoring the strategic balance; the nuclear umbrella, which it managed to acquire in the late 80s, has enabled it to safely indulge in trans-border terrorism and fuel insurgency in India without fear of an all out war.

There is no indication till now about the size of Pakistan's nuclear arsenal. It has undoubtedly had useable nuclear capability for quite sometime now; otherwise it would not have dared to be so brazen in its support to the militants in Kashmir. Earlier the delivery vehicle may have been aircraft but now, with *Ghauri*, the *Hatf* series of missiles, as also the *M-11* missiles acquired from China, it has missile capability as well.

Intrusive Threat

This pertains to the threat of use of force or actual use of force by the developed countries to impose their will on a developing country. It is the modern day equivalent of gun boat diplomacy of the past. "The primary instrument of combat intervention is a naval task force centred around a carrier battle group."[13] It could equally be carried out by air or from the soil of a neighbouring country. Intervention is normally legitimised by pushing through a resolution authorising it in the UN Security Council and projecting it as the 'international will.' The threat is not an existing one but is not purely speculative either. India had a taste of it when the nuclear-armed *USS Enterprise* moved into the Bay of Bengal to intimidate it towards the end of the Bangladesh War in1971. There have been several recent examples of it also like the attack on Iraq first during the Gulf War of 1991 and then again in December 1998.

Other examples are the land-based threat by NATO forces led by the USA in Bosnia and in Kosovo. Even the recent missile attacks on Sudan and Afghanistan, after the blowing up of two US embassies, were a form of military intrusion. From the trend of events in the last few years, it appears that this type of intervention will become more of a rule than an exception in the future. The interventionist force will most likely have nuclear weapons though it would not expect to use them. India is vulnerable to such a threat because the developed countries are determined to impose their version of world order on the developing world, while India has differing perceptions.

NATIONAL SECURITY

Security is a question of perception and therefore largely subjective. Even today, both within the country and abroad,

there are differing views on what India's security needs are and whether it requires nuclear weapons. Security has been defined in many ways, but the most appropriate and comprehensive definition appears to be "the ability of a nation to protect its internal values from external threats"[14].Or as Walter Lippman puts it, "A nation has security when it does not have to sacrifice its legitimate interests to avoid war and is able, if challenged, to maintain them by war."

The 'legitimate interests' mentioned above is another name for the nation's vital interests. These take primacy and it is towards the protection of these that the nation's security policy, which has multiple dimensions like military, economic, technological, societal, and ecological must be directed. In our case, the country's vital interests have never been clearly articulated till now. As a result India has never appeared to have a coherent and long-term security policy.

The nuclear strategy of a country forms a part of its total military policy, which in turn must dovetail into its national security policy. In India's case, this last named has also never been clearly enunciated. In the case of nuclear weapons, however, there are only a few policy options. It may therefore be possible to decide on a nuclear strategy for India even in the absence of a clear-cut security policy. What is important is that the nuclear policy must not undermine the other aspects of national security.

Another important aspect is that one nation's security is another's insecurity. An over-insurance of security may trigger off an unaffordable arms race, which would reflect adversely on the economic aspects of national security and may ultimately result in more insecurity than security.

NUCLEAR WEAPONS AND NUCLEAR DETERRENCE

Nuclear Weapons

The nuclear bomb is not just another weapon of war. Its tremendous destructive power makes it a weapon of mass extermination. It is a device for destroying human life and all things that support human life on earth .The consequences of their use are so horrendous that no nation possessing them can think of automatically using them under a given set of circumstances.

Unlike other weapon systems, there is no adequate defence against nuclear weapons. From all indications, a reasonably efficient defence against them is unlikely to be operational for quite some time to come. The only viable defence is a counter-threat of an unacceptable level of damage with nuclear tipped ballistic missiles – in other words, a deterrent capability. It is this fear of retaliation and the consequent unimaginably high level of destruction that makes a nuclear war inconceivable. As Michael Howard puts it, "If there is one chance in a hundred of nuclear weapons being used, the odds would be enough to deter an aggressor, even if they are not enough to reassure an ally." [15] Andre Beufre opines that if a nation equipped itself with only a few relatively primitive nuclear weapons, it would assure for itself a certain degree of security because of the doubt that would remain in the adversary's mind about their effectiveness.[16]

A full scale conventional war has never taken place between any two nuclear weapon states in the last 50 years, even where there was a skewed conventional capability. Nuclear weapons effectively neutralise conventional superiority. No country can think of advancing into the territory of another country having nuclear weapons beyond a certain tolerance limit. A country can exploit its nuclear edge only

upto a point when there is a chance of nuclear weapons coming into play. On the other hand there will be a greater tendency to rely on border wars, low intensity conflicts and on fuelling insurgencies in enemy countries to achieve the same results. There is a much greater likelihood of war between two states that do not have nuclear weapons than between two nuclear weapon states. Apparently, possession of nuclear weapons tends to have a sobering effect on the leadership of those countries. Nuclear weapons, thus, can not only deter a nuclear war, but also restore the strategic balance between hostile nuclear-equipped states in the area of conventional warfare. It is for this reason that Professor Kenneth Waltz has suggested that a certain amount of nuclear proliferation helps in creating stability rather than exacerbating instability.

Clearly, the destructive value of nuclear weapons makes them militarily less, rather than more, useful. They cannot be used against another nuclear state, and using them against a non-nuclear state would be unethical and would never actually be required; in a situation of nuclear asymmetry, the very threat of their use will ensure compliance. Their military value lies in the political effects of their existence and their "ability to define and shape the political stability between rival nations and blocs".[17]

Nuclear Deterrence

In order to decide the country's nuclear strategy it is first necessary to examine briefly how nuclear deterrence works. In what manner the adversaries will actually react during a nuclear stand off can only be presumed since there is no precedent for a nuclear war. No standard or general responses can be laid down. What may actually happen may never have even been imagined. What is being presumed in this discussion is what the reasonable and logical reactions of nuclear weapon states should be.

Deterrence

Deterrence has been defined in several ways. According to Andre Beufre "It is the dialectic of opposing destruction capacities that gives rise to the phenomenon of deterrence."[18] Roy E. Jones states that "... deterrence is substantially a psychological matter; it is an attitude produced in the mind of the adversary by the threats, actions and gestures of the deterrer".[19] In other words, deterrence is a state of mind. What is necessary is the credibility of the threat and the deterrer must appear to be able and willing to implement it. Employing nuclear weapons for deterrence actually implies their non-use because the concept of deterrence aims at containing a conflict within the parameters of threats alone. These threats should not have to be carried out; if they are, then deterrence has failed.

Types of Nuclear Strikes

The nature and size of the nuclear arsenal required for credible deterrence depends upon the country's nuclear policy. Though India has already declared a 'No First Use' policy, it would be pertinent to broadly go over the types of targets for nuclear weapons and the implications of first strike and second strike. There is a close relationship between the two.

Nuclear targets are broadly categorised as either 'counterforce' or 'countervalue'. Counterforce is attack on the enemy's nuclear weapon systems and his command and control structure. Countervalue is aimed at the destruction of his cities and other military or economic targets like dams, factories, oil refineries and so on, to break his will and make his war effort less effective.

First Strike

In a nuclear exchange, the first strike would normally

have to be against counterforce targets. Unless the attacker has an overwhelming superiority in nuclear weapons, massive first strike against the enemy's countervalue targets instead of his counterforce targets would leave the attacker in a very unenviable position. He would have used up the bulk of his own nuclear weapons while those of the adversary would still be operational. He would then be at the mercy of the adversary and would be compelled to accede to his conditions. A first strike would therefore be a highly risky action by a state with a limited nuclear arsenal.

A first strike on the adversary's nuclear weapons (counterforce targets) would be equally hazardous. The attacker must know exactly how many nuclear weapons, both warheads and delivery systems, the enemy has and also their exact locations. It is unlikely that he will ever have this information to the required degree of accuracy. In addition he must have full confidence in the reliability of his own weapons. He must also achieve complete surprise or there could be a chance of being pre-empted. Even if all these preconditions are satisfied, there would still remain some enemy weapons that would survive. In this case too, the attacker would have exhausted most of his nuclear weapons, while the enemy would still have some that had survived thus enabling the latter to dictate terms rather than be dictated to.

Second Strike

In most cases, counterforce strategy is only relevant to a first strike. For a force surviving a first strike the counterforce targets for a second strike may only be empty missile silos and deserted bomber bases. A second strike would therefore generally have to be aimed at countervalue targets like cities. This can only be undertaken, however, if at least a part of the country's nuclear force has survived the first strike. Survivability is therefore necessary for a credible deterrent.

Credible Deterrent

The more credible a deterrent, the less likely it is to be used. A deterrent needs to have the following characteristics to make it appear credible: -

(a) It must be so large that the enemy has to use the bulk of his nuclear arsenal in his counterforce first strike, and the number of weapons that are likely to survive should be larger than the weapons remaining with the attacker. This will be discussed in greater detail later.

(b) It should be large enough to ensure that it does not put the political and military leadership at a psychological disadvantage during a nuclear standoff.

(c) It must be reliable.

(d) Most importantly, it must be handled by a strong-willed leadership, which must display the nerve to take a defiant stand in the face of a nuclear threat. It must be able to unmistakably convey the impression that it will not be cowed down and will retaliate determinedly.

Survivability. This aspect is central to the concept of a credible nuclear deterrent - the ability to withstand a counterforce strike and thereafter retaliate. Survivability can be achieved by several methods. Some of these are hardening of silos, concealment and decoys, mobility, and a mix of delivery systems, that is, a triad of land-based, air-launched and sea-launched systems.

A NUCLEAR STRATEGY FOR INDIA

In formulating a nuclear strategy for India, it is natural to first study the nuclear strategies of the earlier nuclear powers, especially the USA and the erstwhile USSR. Their strategies were developed during the Cold War over a period

of forty years and passed through many stages as technology and the strategic environment changed.[20] Trillions of dollars were spent in a spiralling arms race.

It was only in 1985 that the two sides decided to face the truth and accept that a nuclear war between them could not be won and therefore should not be fought. Both sides realised that a nuclear war once initiated could not be controlled and that both countries would be destroyed in the process. After all, what could be that national interest which would require sacrifices of such magnitude. And if national interest is dependent on the existence of a nation, it is difficult to see how that interest can be served by the destruction of the nation itself brought about by a nuclear holocaust.

In deciding upon India's nuclear strategy, we must be wary of falling into the trap of thinking along Cold War lines. At the same time we must not make the mistake of totally rejecting all their thought processes. This would be an even bigger mistake. Their nuclear strategies were the outcome of in-depth studies by eminent strategists and military thinkers, whereas strategic thinking has never been the strong point of Indians. No doubt some of the western thinking verged on the ludicrous like their perception that unacceptable damage in the context of the USSR required destroying a quarter of its population and half of its infrastructure.[21] But this is no more fanciful than the contention of some of our military thinkers that a mere handful of nuclear weapons would serve our purpose, just as well as the thousands with the nuclear superpowers.

The studies and analyses of western military writers can form the theoretical basis for devising our nuclear strategy. We must attempt to understand the logic behind them and apply it to our own situation. Their strategy was driven by the inexorable logic of technological advancements and the

need to find an alternative to what John Kennedy called the 'holocaust or humiliation' options of Mutual Assured Destruction (MAD). It was, for example, technological advances like greater accuracy in weapon delivery and satellite reconnaissance which enabled a change of strategy from countervalue to counterforce, but it also required a larger nuclear arsenal. Similarly, developments of Inter Continental Ballistic Missiles (ICBMs), Multiple Independently Targetable Re-entry Vehicles (MIRVs), etc, and matching developments by the USSR, all affected western nuclear thinking and arsenals. Admittedly, we cannot spend trillions on our nuclear weapons, but at the same time the idea that we can achieve nuclear security with just a few weapons is wishful thinking.

India's Nuclear Strategy

In general terms, India's nuclear strategy should be based not on fighting and winning a nuclear war, but on ensuring that a nuclear war is never allowed to take place. The nuclear strategy should broadly be as follows: -

(a) India must never initiate a nuclear confrontation. In other words, nuclear weapons should not be used to coerce another country to follow a particular course of action. Only diplomatic and economic means should be used and as a last resort, conventional military forces. Similarly, any non-nuclear threat should be confronted by non-nuclear means alone and never by resort to a nuclear threat. This implies that conventional forces should be strong enough to deter a conventional attack without needing to fall back on nuclear weapons. The Government's No First Use policy fits in with this. At the same time, the country's security policy should be comprehensive and include non–military agencies as well.

(b) The country's nuclear forces should be strong enough to stand up to a nuclear threat or nuclear blackmail. The deterrent should be so visibly credible that no country would even consider the idea of subjecting India to a nuclear threat.

(c) The nuclear forces should be able to provide psychological back up to our Armed Forces and the political leadership in times of crisis. This is explained below:-

(i) In a conventional war our Armed Forces must be secure in the knowledge that our nuclear forces are strong enough to deter the possibility of nuclear intervention by any country.

(ii) In any nuclear confrontation, India's political leadership should be able to negotiate with full faith in the effectiveness of the country's nuclear deterrent. This is important. A nuclear war has never taken place and is unlikely to ever take place, but there have been many cases of the threat of the use of nuclear weapons. The nature and size of India's nuclear arsenal must enable it to successfully withstand pressures during a stand off.

Another aspect, though not directly related to national security, is the relationship between India's nuclear capability and its importance in international affairs. It is something we hesitate to acknowledge openly, but the possession of nuclear weapons does raise a country's prestige and stature in the world. While there is no denying the fact that a strong economy is an essential complement of nuclear power, it is also a fact that nuclear weapons themselves are the ultimate currency of power. Our nuclear capability must ensure that India can no longer be pressurised or ignored in world affairs.

The case of Japan brings this out clearly. It has the second largest economy in the world. It also has strong conven-

tional military forces; its defence expenditure for 1995-96 was $50 billion[22] (India's defence budget for 1998-99 is about $ 10 billion). Yet China matters more in world affairs because it is a nuclear power. Japan, on the other hand, is under the US nuclear umbrella, and cannot really afford to follow a truly independent foreign policy for fear of annoying the USA. India has already crossed the nuclear threshold and suffered all the adverse consequences in terms of economic sanctions, denial of high technology, severance of military contacts with some of the countries and the world's moral opprobrium. It must not now stop half-way but go as far as possible in drawing whatever advantage it can from the act.

Our history shows that we are willing to wound but not kill. There are several examples where, having managed to achieve a position of advantage we hesitated and allowed it to slip away. In 1948, having already got the tribal raiders and Pakistani forces on the run in Kashmir, instead of driving them right out of the country, we took the case to the UN and accepted a cease-fire. In 1962 having undertaken to throw out the Chinese, we voluntarily abjured the use of the Air Force, the one area in which we enjoyed a distinct advantage, and got thoroughly defeated. Then in 1971, having won a comprehensive victory over Pakistan, we stopped short of exploiting the victory to the full and insisting on final and favourable solution to all the pending disputes between us, but allowed it to get away under the Simla Agreement. Similarly, after conducting our first nuclear test in 1974, we did not complete the process and weaponise but held back and created problems for a later date.

India must not repeat these mistakes. Having taken the plunge, it must go all the way. The nuclear deterrent must be large enough for the rest of the world to take it seriously. Just a few nuclear weapons may perhaps suffice as a deterrent in some cases and at a point of time, but may not be

enough for it to get the respect that is its due. Its nuclear arsenal must be large enough to ensure that India's views are not brushed aside lightly by the developed world. Of all the aspects of India's nuclear strategy, this non-military one is perhaps the most important. Nuclear threats will hopefully be rare, but negotiations at the international level are a daily affair. India will have a psychological advantage if it is seen to be strong and powerful, which means having a large enough nuclear arsenal to complement a strong economy. For a big country like India this should be achievable.

Nuclear Doctrine

The military threat to India's security has already been discussed. To recapitulate, the likely threats are from Pakistan, China and an interventionist threat which could be based on a naval task force or mounted from the soil of a neighbouring country. The country's nuclear and conventional strategies and doctrines can only be effective if they are synergistic. India has already announced a No First Use policy as part of its nuclear strategy. This will have a corresponding effect on the nature and size of its conventional forces. Under this policy, the threat of nuclear weapons cannot be used if either Pakistan or China attacks our territory with conventional forces and manages to achieve a measure of success. Similarly, if either of them, in a limited operation quickly occupies a small piece of our territory and takes up a defensive position, threat of nuclear weapons cannot be used to force it to vacate. Conventional forces will have to be used. Nuclear symmetry between our neighbours and us will tend to encourage proxy wars and low intensity conflicts where nuclear weapons cannot be used. Even when there is firm evidence that a neighbour is blatantly supporting and encouraging such a war, our declared No First Use policy will not allow us to threaten it with nuclear weapons. It will, therefore, be necessary to continue to maintain strong conventional forces to meet such threats.

In the case of an interventionist threat also, a strong conventional Air Force and Navy would be required because, in keeping with its nuclear policy India cannot threaten the use of nuclear weapons to deter it; in any case it would be suicidal to do so. A strong Navy and Air Force would be the only answer. Thus, strong conventional forces are an essential pre-requisite if the country's nuclear strategy is to succeed.

The other aspect of the nuclear doctrine is the role of tactical nuclear weapons. At the heart of the nuclear strategy that has been suggested is that a situation must never be allowed to arise where there could be a possibility of a nuclear war. Use of tactical nuclear weapons, with its possibility of escalating to the strategic level runs counter to this policy. The nuclear doctrine recommended below is based on the presumption that there will be no use of nuclear weapons at the tactical level.

The doctrine given below is based on India's existing technology and current threat perceptions. It will have to be modified as circumstances change and better technology becomes available. The major aspects of India's nuclear doctrine should be as follows :

(a) No first strike in any situation in keeping with the 'No First Use' policy.

(b) A nuclear strike by the enemy to be responded to by retaliating with all the surviving nuclear weapons (less a specified percentage to be retained as reserve.)

(c) Regardless of the type of target attacked by the enemy (counterforce or countervalue) or the type of nuclear weapon used (tactical or strategic), retaliation in each case will be on the enemy's countervalue targets only. The underlying idea is to ensure that the other side does not even think of using nuclear weapons under any

circumstances. India's nuclear doctrine should not in anyway accept the concept of a limited nuclear war.

(d) The nuclear response need not be immediate but should be planned to be launched within 24 hours as far as possible.

Perceptions have an important role to play in deterrence. Appreciations and decision-making between adversaries are seldom identical. A wrong assessment or a mistaken perception on the part of our adversaries could lead to a nuclear first strike. The country's nuclear forces and nuclear doctrine should be widely publicised and made known to all. There should be no ambiguity and no effort to hide our nuclear strength, operating procedures, and most important, the plan to retaliate with maximum strength against the enemy's countervalue targets (cities) only.

NATURE AND SIZE OF THE NUCLEAR DETERRENT

The nature and size of the nuclear deterrent is the quintessence of a country's nuclear posture and is evolved from its nuclear strategy and doctrine. There have been varied views on the subject ranging from a minimum deterrent, which is also the Indian Government's declared policy, to the maximally strategic proposed by Bharat Karnad.[23]

Minimum Deterrent

The logic of deterrence lies in the fact that total defence against nuclear weapons being impossible, the only security against them is to be able to threaten in kind. This in fact was the origin of 'balance of terror'. From this evolved the idea of a minimum deterrent: that since all that was required was the capacity to destroy some of the aggressor's cities, a limited

number of weapons would suffice. As McGeorge Bundy has pointed out, assumption of the loss of a dozen cities is not a choice for a sane man. A decision which would bring even one hydrogen bomb on a city of one's own country would be recognised as a catastrophic blunder.[24]

Even nuclear super powers cannot be certain of destroying all the opponent's nuclear weapons, no matter how overwhelming their nuclear superiority, how accurate their weapons, and how sophisticated their sensors might be. Their intelligence can never be infallible – recently they failed to detect the preparations for the Indian nuclear tests. The nuclear super powers, with all their technological advancements, work on only an 80 per cent effectiveness of their strikes. They expect about 20 per cent of the targets to survive. These could, in turn, target of their cities, causing untold havoc.

This is the accepted assumption underlying deterrence – that no country, however powerful, can lightly hazard the possibility of say, a million casualties, even if it is in a position to inflict a hundred times that number on the enemy. It would not be an acceptable trade-off. "Less than perfect defences are part of the apparatus for limiting the consequences of nuclear war".[25] Advocates of minimum deterrence, therefore, maintain that developing nations can theoretically pursue a deterrent strategy with a specified minimum number of nuclear weapons, regardless of how large and sophisticated the nuclear arsenal of the adversary may be.

Most Indian strategists, therefore, argue in favour of a minimum deterrent. Their main reasons for arguing in favour of it appear to be: -

(a) Affordability – the major reason.

(b) To placate international opinion by indicating that the country has gone nuclear only for its own security

and the fact that it is maintaining only a minimum deterrent shows that it has no aggressive or hegemonistic intentions.

(c) To avoid an arms race.

All these are very sound reasons, of which affordability is decidedly the most compelling. A nation's security has many facets apart from the military. There is no point in acquiring military security if the country is likely to suffer an economic collapse or a social breakdown in the process. The arguments appear logical but there is another side to the minimum deterrent.

The Case Against a Minimum Deterrent

There are some flaws in the minimum deterrent theory. Logically, deterrence should be among forces which are balanced. Nuclear deterrence, it is claimed, is different. Just a few nuclear weapons which can threaten cities of the larger adversary are considered to be sufficient to deter it. The scenario justifying this presumption is developed only to the point where it supports this contention. The reactions of both sides subsequent to this are not followed up.

Certain examples are quoted in support of this contention. It is claimed that during the Cuban Missile Crisis, the USA could have wiped the Soviet Union off the face of the earth but was deterred from using nuclear weapons because it could not risk a single city. Similarly, China has successfully managed to stand up to both the major nuclear powers with just a fraction of their nuclear arsenal.[27] This is one way of interpreting facts. The other way of looking at them could be that in the case of Cuban Missile Crisis, it was ultimately the Soviet Union which backed down and withdrew its missiles from Cuba. And China was not acting alone but was part of a three way nuclear game where it could take advantage of the fierce hostility between USA and the Soviet Union.

There is a need to develop a hypothetical scenario to ascertain the veracity of the theory of minimum deterrence. Presume that a larger nuclear power has 400 nuclear weapons as against 150 held by a smaller power. The smaller power refuses to bow before the nuclear threats of the larger power. The larger power then undertakes a counterforce strike with 300 nuclear weapons with thermonuclear warheads, aiming two weapons at each of the 150 weapons of the smaller power. At the end of the first strike, the larger power manages to destroy 120 nuclear weapons of the adversary, in keeping with its planned kill-rate of 80 per cent. It is now left with 100 nuclear weapons against 30 surviving with the smaller nuclear power. The question now arises - what will be the reaction of the smaller nuclear power? The initiative is now with it to retaliate. Will it dare to fire its remaining 30 weapons at the other's cities and risk a retaliatory attack with the remaining 100 weapons on its own cities, or will it give in to the wishes of the aggressor?

Let us develop the theme further. Suppose there is a stalemate at the end of the first strike. The smaller power neither retaliates, nor accepts the demands of the larger nuclear power. The larger power then fires a single nuclear weapon at one of the cities of the smaller power. It is now left with 99 weapons against 30 of the other side. What will the smaller power's reaction now be? Will it now retaliate, comply with the demands of the larger power, or continue to refuse to react in either way? No one can say with certainty since there is no precedent for such a situation. All that can be said is that the smaller power will all along be under greater pressure and a tremendous psychological disadvantage and may be forced to cave in.

No matter what the scenario, the larger power would always have a far greater number of options. Take the case of the USA. Its nuclear inventory is so large that having targeted

all of the smaller power's nuclear weapons in the first strike, it would still retain the capacity of massively attacking its countervalue targets in the next round if the latter dares to fire its few surviving weapons on US cities, after absorbing the first strike. Visualising its total destruction as the inevitable outcome, it is the smaller power that is likely to get deterred and give way, no matter how strong-willed its leadership. It would be naïve to assume otherwise.

The other flaw in the concept of a minimum deterrent is that it limits the role of nuclear weapons to military use only. After repeatedly asserting that nuclear weapons are political weapons, the advocates of a minimum deterrent end up considering its role as a military weapon, that is, as a deterrent only. India's nuclear deterrent should not only be capable of deterring, but should also be large enough to give it some say in the conduct of international affairs. This is its rightful due as it represents approximately one-sixth of the world's population. Nuclear weapons are, as Bharat Karnad says, "an instrument of strategic independence for a country and an attribute of Great Power ". No country can be considered a great power with a nuclear arsenal of just a few weapons. In the world of realpolitik, 50 or 60 weapons would just be ignored.

Size of the Nuclear Deterrent for India

An analysis of the advantages and the disadvantages of a minimum deterrent leads one to the conclusion that a minimum deterrent can only serve the limited purpose of avoiding nuclear blackmail from a small nuclear power like Pakistan. It would not enable India to face with confidence even a middle-rung power like China. And it would not serve the larger purpose of getting the country to matter more in international affairs. It follows therefore that the country must go in for a deterrent that is large enough to satisfy both the

requirements of nuclear weapons. The Government is committed to acquiring a minimum deterrent only. The term 'minimum' is vague, and fortunately no firm figure has ever been mentioned. There is scope for flexibility.

There is no agreement even among the proponents of a minimum deterrent about the exact number of weapons required. General Sundarji has proposed a deterrent of 150 warheads of 15 kt each.[28] K Subrahmanyam has suggested an arsenal of about 60 warheads of 125 kt each[29], while Air Cmde Jasjit Singh feels that about three dozen nuclear weapons should be adequate.[30] Bharat Karnad does not buy the idea of a minimum deterrent at all and has proposed a maximally strategic deterrent of 328 weapons with thermonuclear warheads[31] to be progressively achieved by 2020-2030 AD.This figure includes 25 atomic demolition munitions (ADM) and 60 tactical weapons.

General Sundarji and Bharat Karnad have given the reasons for their recommended figures but K Subrahmanyam and Air Cmde Jasjit Singh have not given their reasonings. General Sundarji's logic would fail in the light of the nuclear scenario described above. Bharat Karnad, on the other hand, has ignored the Government's pledge of 'No First Use'. He has planned on engaging 60 Chinese cities with four weapons each. This too is impracticable. A first strike by us on cities would leave the entire Chinese nuclear arsenal untouched to attack our targets at will. If he is thinking of a second strike, then we are unlikely to have that many surviving weapons after a Chinese counterforce first strike.

The size of India's nuclear deterrent should be such that even after the adversary has destroyed 80 per cent of its nuclear weapons, the surviving 20 per cent should be as large and preferably larger than the number of weapons remaining with the adversary after his first strike. If India's surviv-

ing nuclear arsenal is larger than the enemy's remaining arsenal, then it is the latter which will be on the defensive and would not be able to achieve its aim. Having initially assessed the likely outcome, he would not undertake a nuclear strike in the first place and would thus be effectively deterred.

A simple mathematical thumb rule for calculating the size of an effective nuclear deterrent on the above principle would be: -

$$20\% \text{ of } x = y - 2x$$

where -

x is the size of the required deterrent.
y is the size of the adversary's deterrent.

And presuming that the adversary: -

a) fires two nuclear weapons against each of the opponent's nuclear warheads; and

b) achieves 80 per cent success in the first strike.

China's nuclear arsenal has been variously estimated at between 300 and 450 warheads.[32] This includes tactical nuclear missiles also, but these too have to be taken into account because in nuclear warfare the dividing line between strategy and tactics is often blurred. The figure of 400 warheads can be taken as a working figure for calculating the size of India's nuclear deterrent.

Based on the formula given above and taking the size of China's nuclear deterrent to be 400 warheads, the size of India's required deterrent would be 182. If China were to fire 364 weapons at the rate of two each on the 182 Indian weapons, it would be left with 36 weapons. If it achieves 80 per

cent success then India too would be left with about 36 surviving weapons, leading to effective deterrence. A few weapons more or less either way would not change the equation very much. Therefore, 182 or say 180, nuclear warheads are the minimum required for military purposes. They would not however enable us to play a more effective role in the management of world affairs. A figure larger than 180 would be required for this purpose.

Cost of the Deterrent

General Sundarji had initially estimated the cost of 150 weapons of 15kt each as Rs 7,000 crores at 1985 prices.[32A] Subsequently he scaled it down to Rs 2,760 crores.[33] For the same number of weapons, Brigadier VK Nair had worked out the cost in 1992 as Rs 6,835 crores over 10 years.[34] Once again, for the same 150 weapons, C Rammanohar Reddy has calculated the cost at between Rs 40,000 to Rs 50,000 crores.[35] Bharat Karnad, for the maximally strategic deterrent of 328 nuclear weapons, has estimated the cost as Rs. 60,680 crores. This includes the cost of $C^4 I^2$, hardening, dispersal and concealment.

Actually all these are underestimates. Only the capital cost of the weapon systems and in some cases a few of the allied expenditures have been taken into account. No one has considered the cost of manpower, accommodation, vehicles, other unit equipment, repair and maintenance facilities, garaging and so on. All these would entail considerable expenditure, both initial and recurring. It is interesting to note that for a nuclear arsenal of about 400 weapons, China's strategic forces number around 120,000 personnel.[36] The final cost of the deterrent in each case is therefore likely to be considerably more than has been calculated. In fact it is unrealistic to decide on the nature of the nuclear arsenal and calculate the cost without deciding on the actual targets and the types

of missiles required for them. Also, in the absence of any authoritative indications about the costs of warheads, missiles etc., cost estimates can be nothing more than wild guesses. No cost assessment has therefore been made in this paper. It would be a futile exercise.

Types of Nuclear Weapons Systems

Warhead. The size of the warhead has generally been proposed to be 15kt. Anything smaller would not be suitable for a strategic deterrent. Bharat Karnad strongly feels that the warheads should be thermonuclear as they have greater explosive power. Greater explosive power can make up for any inaccuracy in delivery and also has more psychological effect. The question of accuracy would only arise if it ever comes to a nuclear war, but the psychological effect of thermonuclear weapons would certainly enhance their deterrence value. If they cost the same as fission weapons, as has been claimed, then thermonuclear weapons would be preferable.[37]

Delivery Vehicles. Delivery vehicles could be either aircraft or missiles. Missiles could be air launched, ground based or sea launched. Each type has its own advantages and disadvantages. These are well known. Some important points concerning them are: -

(a) ***ICBMs.*** There is no dispute that Short-Range Ballistic missiles (SRBMs) and Intermediate-Range Ballistic Missiles (IRBMs) are both required to meet the threat from Pakistan and China. ICBMs also need to be developed in course of time against an interventionist threat. The political leadership would be at a psychological advantage if the intruding force's homeland is also threatened.

(b) ***Prithvi 150.*** There is a view that only *Prithvi* 250

should be nuclear-tipped and not *Prithvi* 150, presumably because it is regarded as a tactical weapon. *Prithvi* 150 can reach a large number of strategic targets in Pakistan and should not be discounted as a strategic weapon. It can be equipped with both nuclear and conventional warheads and used as required.

(c) ***Nuclear Submarines.*** Sufficient priority is not being accorded to the nuclear submarine, though most agree to their ultimately joining the deterrent force. Undoubtedly a submarine based deterrent has many disadvantages. To begin with it is very expensive. A submarine launched missile is less accurate than a land based or air launched one. There are problems in command and control as well as communications. Inspite of all this, it is the most effective deterrent because it is the most survivable. A submarine has more water to hide in - locating a submarime at sea is like looking for a needle in a haystack. They are therefore less vulnerable than land based missiles. The only danger is that they could be trailed by hunter-killer submarines on leaving port. A nuclear submarine will have the ability to threaten targets well beyond India's neighbourhood. It would also be an asset in countering a carrier-based interventionist threat. In fact a nuclear submarine with Sea Launched Ballistic Missiles (SLBMs) is by itself more effective than all the other types of deterrent and needs to be acquired on priority even at the cost of the other deterrents.

(d) ***ADMs.*** Atomic Demolition Munitions (ADMs) have been suggested for use in mountains on non-value targets for blocking passes and causing landslides.[38] This is not in keeping with our proposed nuclear doctrine as it implies use of nuclear weapons for warfighting. It is bound to lead to nuclear escalation.

Nature and Size of the Recommended Deterrent

Cost will be the determining factor in deciding on the size of India's nuclear deterrent. The country cannot bank on savings from any corresponding reduction in conventional forces. As has already been explained, there is not much scope for that. In the final analysis, the deterrent will have to be neither minimum nor maximally strategic, but affordable. Knowing the economic situation of the country, it is obvious that a large enough deterrent would be unaffordable for quite some time yet. It will have to be smaller to begin with, but can be increased as the economy improves.

The recommended nature and size of the nuclear deterrent for India is as follows: -

(a) Initially about 180 x 15kt warheads. This would be large enough to allow the country's leadership to stand up to China confidently in case of a military confrontation. The threat from Pakistan which would have a smaller nuclear force would be automatically taken care of. This figure should be planned to be achieved in the next 7 to 10 years.

(b) The size of our deterrent should be progressively increased to about 300 warheads by about 2020AD, to achieve a credible regional power status. Warheads are to be converted to thermonuclear category, if cost- effective and feasible.

(c) No ADMs to be included.

(d) The number and types of delivery vehicles - both aircraft and missiles – to be decided based on the countervalue targets selected. Initially the dependence will be more on aircraft till sufficient numbers of missiles of the required class are inducted. Similarly *Prithvi* 150

may be phased out after sufficient number of *Prithvi* 250 have been inducted.

(e) Five nuclear submarines should be inducted on priority as and when they are available and SLBMs developed.

(f) ICBMs should be developed and inducted by 2020 AD at the latest.

The size of the nuclear deterrent will have to be continuously varied with further developments in nuclear and missile technology, increases in the adversaries' nuclear arsenals and changes in own strategy.

We cannot delude ourselves. Security does not come cheap. A nuclear arms race with our neighbours is inevitable. We cannot sit back at any time and say that we have acquired the basic minimum for our security. The nuclear arsenal will have to be updated as technology advances and may have to be increased to keep up with our potential adversaries and to widen our nuclear options. Nuclear weapons generate their own dynamics for changes in strategy.

ORGANISATION AND COMMAND AND CONTROL

The organisational structure and the command and control systems for modern wars are designed to bring together a sequence of preplanned and automated events concentrating deadly force in time at the desired point. The individual components of the entire system are animated by a command and control network based on an efficient communications system.

In a counterforce first strike attack, the threat to the command and control structures (C^4I^2) is as serious as to the weapons themselves. 'Decapitation', implying the destruction

of the decision making head or isolating it from its command, could result in paralysing the entire system or triggering of an uncontrolled nuclear war. The survivability of the C^4I^2 system is vital.

The US and the erstwhile USSR were compelled to spend enormous amounts of money on their C^4I^2 systems as they were planning to fight and win a nuclear war. This required sophisticated systems like radars and satellites for obtaining information about the enemy and warning about the launch of nuclear strikes. The entire set up had to be backed by foolproof communications for an immediate response. Because of the high state of readiness of the weapons that this required, there was a very great risk of accidental firings for which elaborate checks and safety measures had to be put in place. All this necessitated a very expensive, large, and widely spread out organisational structure.

The Indian situation is different. The proposed nuclear strategy for India aims at not winning a nuclear war but at making sure that a situation in which an actual nuclear war can take place is never allowed to arise. Secondly, India has already pledged itself to No First Use. This may restrict its options in a nuclear standoff but does give it some extra space for designing its command and control structure. Our nuclear doctrine also does not call for the same degree of time-urgency as in the case of the USA and the erstwhile USSR. Information about enemy forces' build up and targets is not necessary in the time frame required to strike first or pre-empt a possible strike by the enemy. An immediate response is also not mandated. It should be within 24 hours, which will give enough time to establish other means of communications if the dedicated communications fail. The safety requirements also need not be as strict as those of the advanced nuclear powers because our doctrine does not demand keeping weapons on hair-trigger alert. The size of the nuclear force

will also be smaller. All this will help to cut down expenditure considerably.

Every country must develop a $C^4 I^2$ system to suit its own requirements, which should continue to change with the increase in the size of the nuclear arsenal, advances in technology and changes in its nuclear strategy and doctrine. China, for example, controlled its expenditure in the initial stages by not attempting to reduce the vulnerability of its nuclear forces. It did not try to ensure a second strike capability and spent very little money on early warning, quick response or nuclear hardening of its various systems.[39] Since then, over a period of time it has acquired the ability to respond flexibly to various levels of nuclear attacks and also ensured a second strike capability.[40] India must therefore structure its $C^4 I^2$ system to suit its own nuclear strategy and its peculiar requirements.

Organisation of Strategic Forces

The strategic forces could be raised in one of the following three ways: -

(a) Land based missiles as part of the Army, Ships Submersible Ballistic Nuclear (SSBN) as part of the Navy, and airdropped/launched nuclear weapons as part of the Air Force.

(b) As Strategic Air Command under the Air Force.

(c) As a separate Service.

Distributing different types of weapons systems among the three Services could be economical, but would create problems of command and control as well as of communications. There will also be difficulty in developing a common strategic perspective between the three Services and reconciling it

with their individual service perspective. There may also be unnecessary duplication in the servicing and repair facilities.

The rationale for raising nuclear forces under a Strategic Air Command as part of the existing Air Force is greater. The Air Force already has the aircraft to be used as delivery vehicles for nuclear bombs. It also has well established communications and a system for quickly obtaining and processing information for its air defence role. There will be no inter-Service problems regarding the use of airspace by the nuclear forces as it is already under the control of the Air Force. All that would be required would be to raise a separate Strategic Air Command and augment the existing strength of Air Headquarters to take on the additional load.

The biggest disadvantage of the strategic forces being part of the Air Force would be that, as the smaller component of a larger organisation its development would be stifled. The day-to-day preoccupations of the Air Force like surveillance of airspace, serviceability of aircraft, training, personnel management, and other sundry problems would be the primary concern of the Chief of the Air Staff and Air Headquarters. These would tend to take up the bulk of their time. Consequently, inspite of their best intentions, the strategic forces and their problems would not receive the attention they require. This is no presumption. The Army already has some similar experience. Over the years it has been forced to separate the smaller elements like the Air Defence Artillery, the Army Dental Corps, and the Military Farms from the larger organisations of which they were a part. In each case the split was precipitated by operational or functional reasons and not administrative reasons. After separation, the separated portions quickly grew to their full potential.

Nuclear forces comprise high technology weapons systems which require specialists for their handling and main-

tenance. It would be ideal if they are raised as a separate service. The head of the strategic forces should be of the same rank as the other three Service Chiefs and should have access to the highest levels of the Government. The strategic forces should also have a separate budget.

Chain of Command

The command and control apparatus of the nuclear forces must be guided from the political leadership down to the firing command post. Whether democracy or dictatorship, decision-making for use of strategic nuclear weapons is always concentrated at the highest political level and is passed on to the weapons through a military command structure.

There can be no argument that in India the final authority to decide on the use of nuclear weapons must be the Prime Minister. The principal threat to this type of centralised control is decapitation. There must therefore be a system of graceful degradation by which authority is automatically delegated down the hierarchy whenever the authority on top becomes non-functional for any reason. It is suggested that after the Prime Minister the authority should pass down to the Defence Minister and thereafter to the Home Minister. Legislation to this effect will have to be passed. The military should not come into this hierarchy because it is at the political level that the decision or negotiations for termination of hostilities would have to take place. Also, a political person is more in touch with the mood of the people.

The other issue is of a Chief of Defence Staff (CDS). The necessity for a CDS was being felt even before India became overtly nuclear in May '98. The reasons need not be gone into here, but it has become even more compelling now. Strategic planning demands a wider perspective and the need to rise above individual Service considerations. This would not be

possible without a common head of the three Services armed with effective authority.

In the nuclear chain of command, the CDS would be the interface between the political leadership and the strategic forces. Orders to the strategic forces would be passed from the National Command Post (NCP), where the Prime Minister and his staff would be located, to the CDS Headquarters. From there they would be sent through the intermediate nodes made up of the nuclear formation headquarters and unit headquarters and onto the firing command post (CP) of the strategic weapon concerned.

To avoid decapitation there would have to be an alternate NCP where the Defence Minister would be located in times of crisis. The NCP should be in Delhi, suitably protected against nuclear attacks, while the alternate NCP should be outside Delhi. The communications network must be designed to ensure that the destruction of any of the intervening headquarters or nodes does not break the chain of command.

Deployment of Weapons Systems

Survivability along with the ability to fire at the designated target within the stipulated time is the essence of nuclear weapon deployment. The deployment of nuclear weapons has to be considered in terms of both the warheads and the delivery systems. In the case of warheads, it has to be decided whether or not they should have the nuclear core inserted in them and how they should be stored. It would be preferable if nuclear warheads are stored separately in a limited number of secure storage sites with the nuclear core not inserted. These sites must be well guarded against sabotage and must be hardened against nuclear attacks. There must be a well organised procedure for the rapid transportation of warheads to the designated delivery systems when required. The storage and release of warheads should be the

responsibility of an agency not directly under the security forces. This will provide additional safety. Separate storage of warheads and delivery systems will not affect operational effectiveness because even if the warheads cannot be delivered to the weapon site within the warning period, it would still be possible to get them there and launch the second strike within 24 hours. For obvious reasons the warhead and the delivery systems cannot be kept separate in the case of SSBNs.

Two factors which basically affect the deployment of delivery systems are operational requirement and survivability. Operational imperatives suggest that delivery systems will have to be distributed between the Western and the Eastern theatres. The bias for the allocation of Short-Range Ballistic Missiles (SRBMs), (*Prithvi* 150 and 250) would be more towards the West, while the IRBMs (*Agni* I and II) would be mostly in the East. A few *Agni* Is would also have to be positioned in the West. SSBNs and ICBMs would have to be centrally controlled by the nuclear forces' headquarters.

To achieve survivability the options are dispersal, hardening and mobility. Dispersal includes spreading out of missile sites. In the US strategic forces, a Wing - which has 150 missiles - can be spread over an area of upto 18,000 square miles.[41] An individual missile is placed in a silo with a fenced off surface area of two acres strewn with sensors.[42] In India, this sort of a dispersion could create problems such as availability of land, objections by the local population, and restrictions on animal grazing. Dispersal in our case would have to be more selective and public opinion would have to be prepared before the deployment of nuclear weapons.

Hardening against nuclear attacks. This could be very effective, but is a major task and very expensive. For example, a *Minuteman* silo is 25 metres deep, 4 metres in diameter and protected by a six side carapace weighing 100

tons.[43] The silos would also continue to require further hardening as the enemy acquires better and more accurate weapons. This can be very expensive. It is known, for example, that the initial hardening of 550 *Minuteman* silos and 55 launch centres from 300 psi (pounds per square inch) to 1000 psi had cost the US $600 million.[44] The subsequent upgradation of these to withstand blast overpressure to the present 2,000 psi would again have been at enormous cost. With the ever increasing accuracy of nuclear weapons in the future, the advantages of hardening are questionable; more so since fixed, hardened silo sites provide the enemy with accurate locations for counterforce attacks.

Mobility. The best option appears to be to bank on mobility. Mobile missiles, along with decoys, would create targeting problems for the enemy. Locating and destroying mobile *Scud* missiles proved to be the most difficult task for the UN forces during the Gulf War. The missile launching sites can be kept pre-surveyed and the missiles moved there from hidden locations for firing when required. Dispersal, coupled with mobility, concealment, and decoys should provide sufficient survivability for the missiles.

Safety Measures

The effects of nuclear weapons being so horrendous, there is a requirement for foolproof safeguards against accidental nuclear firing. It is necessary not only to lay down the authority and the detailed procedures for launching a nuclear weapon but also for the handling of nuclear weapons.

The problem is what Peter D Fever calls the 'always/never' dilemma.[45] There is need for a high assurance that the weapons will always be able to respond urgently when required. This requires that the warhead be always close to the delivery system and, in some cases, even some delegation of authority. At the same time, it is necessary that there should

never be any unauthorised or accidental launching. This, on the other hand, requires centralisation of authority and time consuming safety measures. In our case, since there is less time-urgency for a nuclear response, it should be possible to tolerate time-consuming procedures for safety and control. In any case there should be no delegation of authority in the initial stages till our forces get used to the new weapons and procedures.

Safety measures can be broadly classified as technical means, and organisational and administrative measures.

Technical Means. These are electro-magnetic pulse (EMP) hardening, coded lock devices (also called permissive action links, PALs) and safety features, which are part of the nuclear warhead design. These must be put in place. PALs are codes which unlock the coded mechanisms to allow the weapon to be launched. These are different for each level in the chain of command and involve very advanced technology.

Organisational and Administrative Safety Measures Required. These are firstly, code management for PAL and secondly, strict personnel monitoring programme to avoid sabotage or psychologically unbalanced persons handling nuclear weapons. A third requirement could be the imposition of a two-man rule at every stage from maintenance to deployment and firing. Under this procedure two persons are required to be involved at every stage in the sequence of action down the chain of command from the issue of orders by the NCP to the actual firing of the weapons. Each of the two must receive his instructions independently.

When a country is initially developing its nuclear capability, the stress is on developing technology for the weapon and not so much on developing technology for safety measures. This could be the case with India too. If so, there is a

requirement for imposing additional manual and procedural checks till such time when suitable technical safety measures are developed.

There is also a strong case for sharing technology for safety with adversaries to avoid an accidental nuclear war. India should consider sharing its PAL technology with Pakistan if it has already developed it; alternatively, ask China or Pakistan (if either has it). They should be willing because, as has been said, an unintended strike against the enemy is a shame, but an unintended strike by the enemy is a disaster.[46] This disaster must never be allowed to happen. A hotline already exists between India and Pakistan. This can be used to reassure the other side if an accidental launch has taken place. A similar arrangement should be made with China.

It may be mentioned here that one of the disadvantages of CTBT is that the efficacy of newly developed safety devices can no longer be checked during live tests. These will have to be tested on simulators only.

Information and Intelligence

The advanced nuclear powers have a very complex system of gathering information and processing it because their nuclear strategy was based on warfighting and assured survival of weapons for a retaliatory attack. In the US, NORAD and Space Command control a global network of satellite-based electronic warning systems stretching far into space. These are designed to give immediate information about various types of missile attacks. Ground-based radars including air defence warning radars, over the horizon radars and AWACS take on from where the satellites leave off. An elaborate communications system enables the information to be passed to the various command and control nodes.

Indian nuclear forces do not require this type of imme-

diate information as our doctrine does not demand responses like 'launch on warning' or 'launch under attack'. Our targeting policy is countervalue targets only, in a second strike. Locations of such targets do not change. Information about the build up of enemy nuclear forces is required in a reasonable time frame. Warning about the actual launch of a missile attack, if available immediately, would be a bonus.

The most suitable method of obtaining information is through satellites and radars. Orbits of satellites to be launched for intelligence purposes should be so planned that they cover our areas of nuclear interest. In times of crisis information should come to the NCP direct, where there should be facilities to analyse and pass it on to the various control nodes. Any information picked up by air defence radars or other airborne radars should be quickly passed upwards to the NCP. Communications and procedures will have to be designed for this.

Communications

These will have to be engineered based on the actual layout on the ground. The principles are very clear. They must be survivable and foolproof with inbuilt redundancy. There have to be direct communications from the NCP to various headquarters and firing command posts and between each other. They must also be EMP hardened. The advantage we have is that since immediate response is not required, if communications do fail for some reason, there would be time to establish alternate means of communications.

The biggest problem will be of communications with submerged submarines. Various methods have been tried but it is still very difficult to fully tie up the SSBNs into the C^4I^2 systems. Certain pre-determined procedures will have to be relied upon.

CONCLUSION

Inspite of all the talk about disarmament, it seems highly unlikely that nuclear weapons will cease to exist. There are some who believe that if at all this happens it will be only because even deadlier weapons are available. India has therefore done well to go nuclear. The P5 countries have no intention of giving up their privileged status.

Indian nuclear forces must be organised as an independent service. The nuclear deterrent can be small to start with, but it must be progressively increased to increase the country's nuclear options. It is only when India has a greater number of options that it will be taken seriously by the other nuclear powers and its voice heard with more respect in world affairs.

Nuclear power and the security that comes with it has a price. This is something we must accept. High costs will be inevitable as we try to keep up with technology and our likely adversaries. Our leaders often make unwarranted unilateral commitments like 'No First Use' and 'Minimum Deterrent', which unnecessarily reduce the country's space for manoeuvre. The same thing happened in the case of the acquisition of nuclear weapons. We kept denouncing them on moral grounds and then became prisoners of our own pronouncements. Our leaders must not make any more such commitments which may bind us in the future.

Lastly by becoming a nuclear weapon state, India has taken the first tentative step in keeping with its size. The goal is clear. There must be no hesitation now.

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